

PROFIT PREVIEW FOR FORTY-NINE

omplete Review of the Automotive Service Industries Show

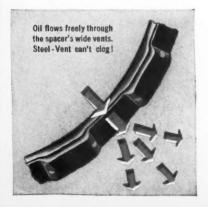


Steel-Vent is a "wet" ring. Its greater surface area helps give it greater oil carrying capacity. It delivers this extra oil freely to the cylinder walls to provide generous wall lubrication all the way up.

Steel-Vent keeps oil always under control with patented features that give it high unit pressure with lower total tension. More-than-ample drainage capacity easily handles the extra oil. Steel-Vent can't clog. Its side-opening spacer operates against a moving segment with a "breathing" action that breaks up and flushes away clogging particles of carbon and gum.

These are three important reasons why Steel-Vent gives longer service life in any job—re-ring or rebore.

HASTINGS MANUFACTURING COMPANY . HASTINGS, MICHIGAN . HASTINGS LTD., TORONTO





HASTINGS

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Use

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STEEL-VENT DISTON DINGS

TOUGH on Oil-Pumping GENTLE on Cylinder Walls

U.S. PAT. 2,148,997

The All Weather... RUBBER LUBRICANT



Permatex Rubber Lubricant penetrates, lubricates and protects all rubber parts.

It is insoluble in water, therefore rain will not wash it away.

It contains no petroleum oils or solvents that cause rubber to swell or rot.

Use it to instantly stop annoying grunts and squeaks in all rubber bushings, shackles, grommets and pads.

Remember Permatex Rubber Lubricant. . .

Stops the Grunts the Car Owners Gripe About!

PERMATEX COMPANY, INC., BROOKLYN 29, N. Y.

MOTOR AGE, January, 1949

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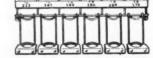
MAREMONT LEADS in Tail Pipe Racks

MAREMONT'S SPACE-SAVING TAIL PIPE RACK (MH130) provides dealers with a neat, convenient method for stocking awkward-to-handle tail pipes. The rack holds 12 tail pipes, each one easily accessible. Made to hang from either a wall or ceiling—takes no floor space. Eliminates danger of tripping over loose pipes. The stock numbers on the rack make re-ordering simple and, best of all, boost your sales.

The MAREMONT TAIL PIPE RACK is only one of many outstanding reasons for MAREMONT'S leadership. Add to this the superb quality of every MAREMONT product, the numerous sure-to-sell merchandising and service helps for dealers, and you can easily see why alert service men everywhere are making more money and giving better service with MAREMONT . . . the leading muffler line.

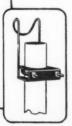
For complete details, see your nearest MAREMONT wholesaler or write to factory.

Maremont's Space Saver Tail Pipe Rack No. MH130



Closeup shows easily read numbers for identification and reorder reminder.

Demountable Hook, shown right, makes it easier to hang pipes up and take them down.





ALE AMAREMONT AUTOMOTIVE PROBUCTS, Inc.
1600 S. Ashland Ave. Chicago 8, IRI.

ALSO MANUFACTURERS OF MAREMONT ALLOY STEEL SPRINGS

M

MOTOR

AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

for AUTOMOTIVE SERVICEMEN

Vol. LXVIII, No. 2

JANUARY 1949

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y, 1949

BRAKE LININGS for BONDING

Bonded brake lining will be on the increase this year. Detroit reports that at least one, if not more, of the most popular passenger cars will be shipped from the factory with bonded brake linings in 1949. Get yourself set for this service business by stocking Raybestos for bonding—available in Ray-BOND, Wire Molded or Bonded Lined Shoes.



Ray-BOND—PG sets for bonding. The same seven different types of lining furnished in the same correct factory-packaged combinations as the famous PG sets for riveting meet the exacting requirements of modern brakes in replacement service. Proved by more than 2 years of bonding service and many thousands of sets in use.

Wire Molded for Bending—This long-wearing, nonfinde lining has a new and exclusive drop-center warp that assures a uniform flat surface so vitally necessary for bending.





Bended Lined Shees—An expanded line to most a fast growing demand for lined shees. Bonded lined shees are available in either Ray-BOND or Wire Motded.



AMERICA'S BIGGEST SELLING

BRAKE LINING



The Raybestos Division of Raybestos-Manhattan, Inc., Bridgeport, Conn.

RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings . Brake Blocks . Clutch Facings . Fon Belts . Radiator Hose . Packings Mechanical Rubber Products . Rubber Covered Equipment . Asbestos Textiles . Powdered Metal Products . Abrasive and Diamond Wheels . Bowling Bells

Puddle Trouble?

NOT for the 3 million windshields washed by TRICO'S "Two Little Squirts"



T'S the busiest time of the year for Trico's "Two Little Squirts" when cars and trucks splash through slush and mud.

And it's the season when it's easier than ever to sell the Trico Automatic Windshield Washer to owners of new cars and old . . . especially now that so many thousands of cars have special built-in provisions for quick installation.

Three million users, plus Trico's year-round advertising in the Saturday Evening Post and other national magazines, are building an ever-increasing demand. Try "campaigning"

your customers this month.



There's added profit, too, in Trico Washer Solvent - for use during cold weather months.



TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.

Windshield Washers

Fully Automatic... Nothing to Pump

Success from

Sett New Performance Performance Standard

Sweeps Nation in 48!

A MESSAGE TO JOBBERS AND DEALERS

A year ago the sensational new Resistor Spark Plug was announced by Auto-Lite. We made definite claims regarding the operating advantages of this plug.

The year that has passed has more than justified our hopes and our claims for this new product.

It is our conviction that the Auto-Lite Resistor Spark Plug is the spark plug of Today and the Future; that every far-sighted automotive merchant should give the most serious thought to the significance of this new development and what it will mean to his business.

the start...

AUGUSTA SPARK PLUGS

Acclaimed by car owners coast-to-coast

DEALERS report the operating advantages of this scientific Auto-Lite development are so sensational car owners everywhere are replacing their regular type spark plugs with Auto-Lite Resistors. Again and again the good news repeats itself. When narrow gap spark plugs are replaced with wide gap Auto-Lite Resistor Spark Plugs, your customers get benefits like smoother idling, better gasoline economy

and increased electrode life up to 200% and more. The fact that the Auto-Lite Resistor Spark Plug cuts spark plug interference with television alone makes it the spark plug of Today and the Future.

For your own profit, and to help car owners get more driving satisfaction, buy and sell the revolutionary new wide gap Auto-Lite Resistor Spark Plugs.

Toronto, Ontario

THE ELECTRIC AUTO-LITE COMPANY

Merchandising Division

Toledo 1, Ohio



Yes, Pedrick "Heat-Shaped" piston rings are helping more and more shops show a healthy profit in engine repair business!

A patented Pedrick process, "Heat-Shaping" produces rings which make your overhaul jobs last longer, give better service. "Heat-Shaped" rings press *evenly* against the cylinder walls all the way around. No excess wear from unequal pressure! What's more.

"Heat-Shaped" rings hold their shape far longer. They won't warp or distort on the job.

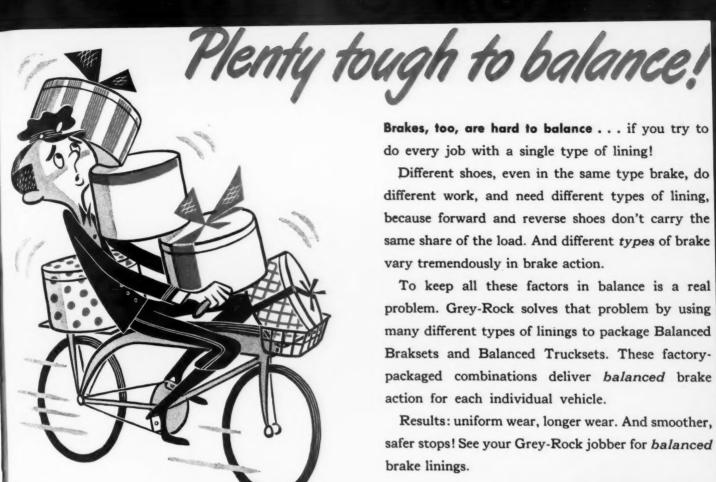
To make bigger profits in engine

Franchise Dealer Plan

Includes not only piston rings and complete service information, but a full program of advertising and merchandising help to bring more engine jobs into your shop. Ask your Pedrick jobber. repair work . . . and to attract more engine overhauls . . . use Pedrick "Heat-Shaped" rings in Engineered Sets, backed by the most liberal guarantee in the piston ring industry. WILKENING MANUFACTURING Co., Philadelphia 42, Pa. In Canada: Wilkening Manufacturing Co. (Canada) Ltd.. Toronto. For 29 years, supplier of piston rings to leading vehicle and engine manufacturers.



PISTON RINGS ARE "HEAT-SHAPED"



Grey. Rock

BALANCED BRAKSET

Let Grey-Rock national advertising help build your brake profits. Your customers see the famous Grey-Rock name regularly in POST, HOLIDAY, and COUNTRY GENTLEMAN.

> Grey-Rock has Balanced Braksets

BALANCED BRAKSETS for passenger cars (riveted or bonded) BALANCED TRUCKSETS for light and medium trucks BOLT-ON-BLOCKS for heavy-duty buses, trucks, and trailers STANDARD WYRBAC SETS of Grey-Rock quality VEE-LOK, Molded and Semi-Metallic CLUTCH FACINGS FAN BELTS . RADIATOR HOSE

UNITED STATES ASBESTOS DIVISION of Raybestos-Manhattan, Inc., Manheim, Pa.



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y, 1949

How America Worked for Jim and vice versa

Reading Time: 1 minute, 48 seconds



At the turn of the century, when young Jim deserted the family farm, the picturesque old general store at the crossroads was still a forum where neighbors discussed crops and politics. Our hero learned much about human nature as "handy man" there . . . and, incidentally, saved most of the \$12 a month which he earned (with board and keep) for 15 hours of daily toil.

Frequently, he recalls, the talk around the old base burner veered to those new horseless carriages that were beginning to tear along roads, some claimed "better'n a mile a minute". One day Jim saw a picture of an early touring car labeled "Transportation of the Future." It so fired his imagination, he confided to every customer who would listen to his fantastic plans, that some day he'd own one of



Jim served several years of apprenticeship in the general store and learned many fundamentals of retail selling. Then, with a total capital of \$155.00, he opened a grocery store in a nearby town. Other lines were gradually added. The volume grew. So did Jim's savings. Finally he bought the first car in town, and what a day that was for traffic along Main Street!



A taste of motoring was all Jim needed to see the future of the automobile industry. He wanted to be part of it. So he sold out, banked a neat cash sum and took a job in the nearest big city as an automobile sales-man "just to learn the ropes." The next step was a partnership in an automobile dealership, and finally his name alone over the door.



It's thirty years since the close of World War I when Jim became a Dodge dealer. Folks say that his persistent salesmanship made the community so car-minded that diagonal parking laws and traffic lights were adopted long before the neighboring towns ever needed them. More than that, Jim's initiative has built an enterprise which in turn provides useful opportunities for a number of employees. Some of

them already have youngsters at college. That's America for you!



Chrysler Corporation

PLYMOUTH • DODGE • DESOTO • CHRYSLER • DODGE "Job-Rated" TRUCKS



When your customer is a **BEAR** for power . . .



set the timing to take full advantage...



of the high antiknock quality of "ETHYL" Gasoline . . .



and keep him happy with you and your service.

ETHYL CORPORATION, New York 17, N.Y.

Products sold under the "ETHYL" trade-mark — Antiknock Compound . . . Salt Cake . . . Ethylene Dichloride . . . Sodium Metallic . . . Chlorine (liquid) . . . Oil Soluble Dye

RUCKS

y, 1949



Wagner brake service products are best—and best known. When you feature all three, you tie in with Wagner's national advertising to make greater profits and offer the most familiar and most dependable service. For Safety's Sake, thousands of car owners ask for Wagner brake products.

REPAIR

with WAGNER LOCKHEED HYDRAULIC

BRAKE PARTS... Genuine Parts by Wagner—pioneer manufacturers of original Wagner Lockheed Hydraulic Brakes—assure perfect fit, dependable performance and customer satisfaction. Your customers know and accept Wagner's reputation for quality products.





with genuine WAGNER LOCKHEED BRAKE

FLUID... An all-season fluid that functions perfectly under all atmospheric temperatures. Used by car and truck manufacturers and recommended for all hydraulic brakes.





with WAGNER COMaX BRAKE LINING

Designed, manufactured and thoroughly tested to insure more quick, safe, smooth stops per lining. Complete coverage for *all* your needs...in sets, rolls, blocks, slabs or cut segments. Available everywhere through Wagner wholesalers.



YOU CAN DEPEND UPON WAGNER QUALITY BECAUSE ... WAGNER PRODUCTS

ARE USED AS ORIGINAL EQUIPMENT BY AUTOMOBILE MANUFACTURERS.

Wagner Electric Corporation
6498 PLYMOUTH AVE., ST. LOUIS 14, MO.

Electric Corporation

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID . MoRAL COMMAX BRAKE LINING . AIR BRAKES . TACHOGRAPHS ELECTRIC MOTORS . TRANSFORMERS . INDUSTRIAL BRAKES

A New Market Every Year For

DELCO-REMY ELECTRICAL EQUIPMENT

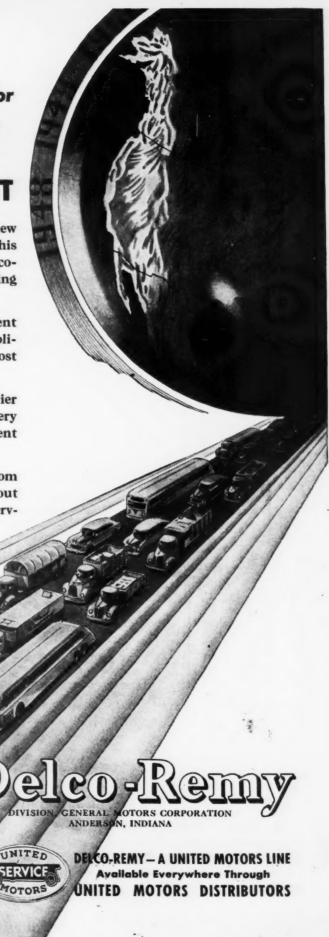
Delco-Remy electrical equipment is used on more new cars, trucks and buses than any other make. This means that you not only have a new market for Delco-Remy replacements each year, but also a continuing and constantly expanding one.

Delco-Remy is so widely used as original equipment that you get the greatest range of service and application data available. You're equipped to service most new cars on the road at any time.

And because Delco-Remy provides parts for earlier models as well as for the new cars you service every day, you're able to meet these electrical equipment needs promptly.

The Delco-Remy line is available immediately from your United Motors Service distributors throughout the nation. Start now to build up your electrical service business with Delco-Remy.

WHEELS



MOTOR AGE, January, 1949

PROPELLERS SPIN

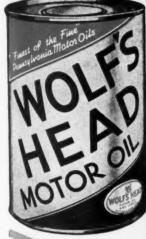
LIFT-POST*

Revolutionary New Lifting Equipment for 1949's Revolutionary New Car Designs



If he wants to know why... you can reply

IS THREE STEPS AHEAD



EXPERTLY CONTROLLED DEWAXING

keeps Wolf's Head free-flowing even in cold weather.



DOUBLE DISTILLING makes Wolf's Head richer, tougher, more heat resistant.

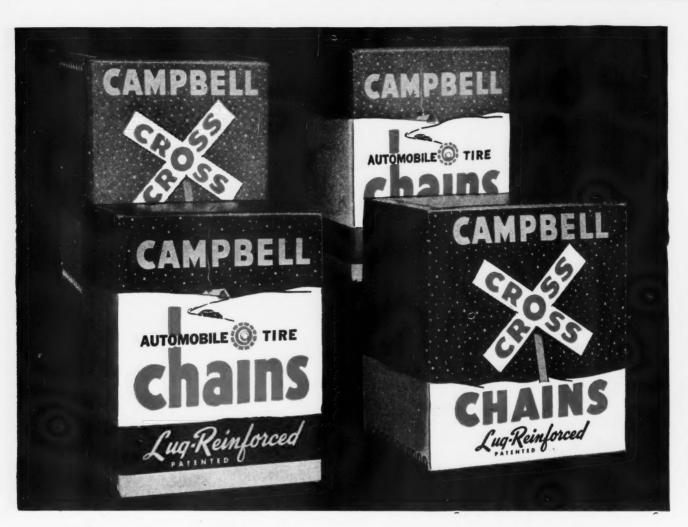


removes all free carbon and other troublesome impurities.

Here's a real way to boost your sales. Tell every customer why Wolf's Head is better. Tell them that the refining process of Wolf's Head Motor Oil is carried three steps further than that of ordinary oils. And explain that Wolf's Head . . . 100% pure Pennsylvania, premium grade . . . is a superior refinement of only the finest Pennsylvania crude. Once you make it clear that there's a big difference between Wolf's Head and ordinary oils, you've found the quickest way we know of to get your customers to ask you for Wolf's Head . . . every time they need oil. Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N. Y.

100% Pure Pennsylvania-"Premium Grade" P.G.C.O.A. Permit No. 6





NOW!... Sensational New Packaging for CAMPBELL TIRE CHAINS

Campbell Passenger Car Tire Chains and Cross Chains are now packed in specially designed reinforced boxes. The durable construction of the metal-edge boxes for Lug-Reinforced* and Highway Service chains provides a handy storage box for the chains at all times. The boxes are plainly marked for easy identification when you store them or stack them in displays. A handy chain applier is supplied with each pair. Tire Chains are packed six pairs to a shipping carton and Cross Chains six boxes of 50 each to a shipping carton. International Chain & Mfg. Company, York, Pa.

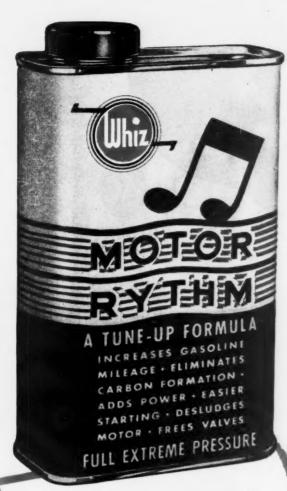
*U. S. Pat. No. 2,093,547 Canadian Pat. No. 223,568



CAMPBELL Lug-Reinforced TIRE CHAINS

THE CHAIN WITH THE SAW-TOOTH GRIP

M



Here's the Deal!

You buy 8—four ounce cans...Retail 1.60

You buy 8—pint cans Retail 6.00

You buy 20—quart cans Your cost \$15.00
We give you 4—quart cans Retail 5.00

It's easy to see that the free goods will more than pay that cash bonus!



It provides a cash bonus for your men on

MOTOR RYTHM sales!

At our expense, you pay your men three cents cash bonus for every four-ounce can of Motor Rythm* sold... ten cents cash bonus for every pint... twenty cents cash bonus for every quart!

That's right! We stand the cost of this volume-building plan . . . you get better than 50% mark-up profit . . . your men have a cash bonus reason for selling more Motor Rythm! It all adds up to bigger and better business for you!

Don't waste a minute in getting the details from your Whiz jobber! R. M. Hollingshead Corporation. General Offices: Camden, New Jersey. Canadian Offices: Toronto. Warehouses: Dallas, Chicago, San Francisco.

*Trademarks Registered U. S. Pat. Off.







When you display the AC Service Dealer Sign, on the products which you handle, you become a national advertiser by tying in with the AC advertising on those lines.

Each line of AC Profit Boosters builds two kinds of profits for you—sales profits and service profits. Every Profit Booster is a replacement item and brings your customers back for service from time to time.

Consequently, when you sell AC, you build a constantly growing business, steadily made better by AC engineering improvements and AC advertising.

Almost every car and truck on the road has one or more AC products. That means a whale of a market.



AC GASOLINE STRAINERS



AC SPEEDOMETER CABLE-CASING ASSEMBLIES—
"TAILOR-MADE"

AC SPARK PLUG DIVISION . GENERAL MOTORS CORPORATION

Profit Boosters



AC SPARK PLUGS WITH PATENTED CORALOX INSULATORS



AC FUEL PUMPS-"HEART OF THE FUEL SYSTEM"



AC OIL FILTERS AND ELEMENTS—
"DIRT-PROOF" ENGINE OIL



AC FLEXIBLE LINES—"TAILOR-MADE" ASSORTMENTS .

AND BULK MAKE-UP KITS

, 1949



"WE'LL TELL THE WORLD"

They're New!

... AND MUCH OF THE TELLING will be through the automotive repairman.

Yes, it is the repairmen who will be recommending explaining and installing these

radically improved parts that mean so much to longer car life, economy and performance.

That is why it is important that automotive mechanics know about these latest Thompson engineering developments. Get full information from your TP Jobber on availability and applications.



THE VITAMETER

Greatest performance booster for engines since



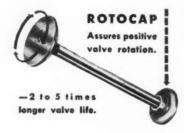
VITOL

Anti-Knock, octane boosting fluid - injected only as needed - with the VITAMETER.



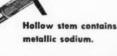
Thompson TECHNICAL LIBRARY

27 "How-todo-it"volumes help repairmen. You can own it at NO COST TO



SODIUM-COOLED VALVE

An improved, aircraft-type valve for heavy duty automotive service.



STEEL-BELTED PISTON

Patented cast-in STEEL **BELT** positively controls expansion. Closer fits without scoring or seizing. An exceptionally strong alloy piston.



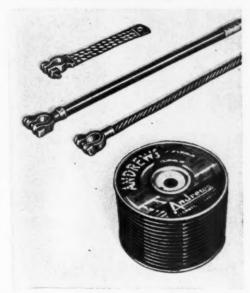
COPPER-COATED "500 BRINELL" SLEEVE Easier installations. Better cooling. Aver-

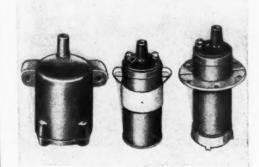
ages 21/2 times longer wear

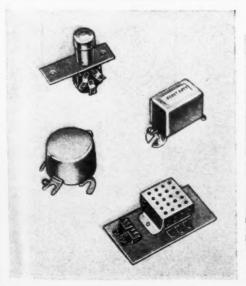
YOUR BEST BET ALWAYS ... THOMPSON REPLACEMENT PARTS



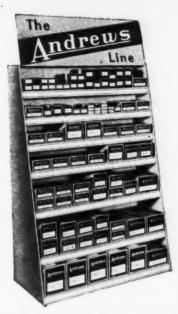
See your Thompson Products, Inc.







NEW! Andrews CABINET MERCHANDISERS



New ignition and electrical service stocks . . . designed especially for dealers requiring a well-balanced stock of parts at small investment . . . attractive all metal cabinet furnished.

M-530 — Fast moving parts to service all popular cars.

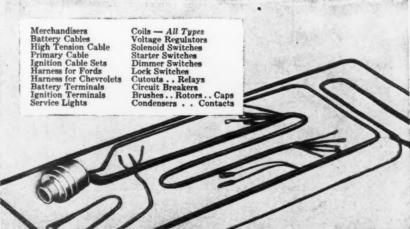
M-540 — Popular numbers to service Ford-Mercury only.

Customer Satisfaction Since 1921

Andrews

MANUFACTURING CO.

ST. LOUIS, MO.



Most of your Customers Prefer 1 over

Do you stock

Spark Plug all others!

land sell it?



AMERICA'S FAVORITE

Another Crescent Innovation!

CRESCENT-WIRY JOE MAROON PLASTIC CABLES

CRESCENT LEADS AGAIN! Now, the famous Crescent-Wiry Joe Maroon Cables are *plastic* to make them even better than ever before!

These advantages of plastic are universally established:

- PLASTIC is impervious to oil, grease, heat, abrasion, and is highly resistant to acid.
- PLASTIC is extremely flexible.
- PLASTIC does not support flame.

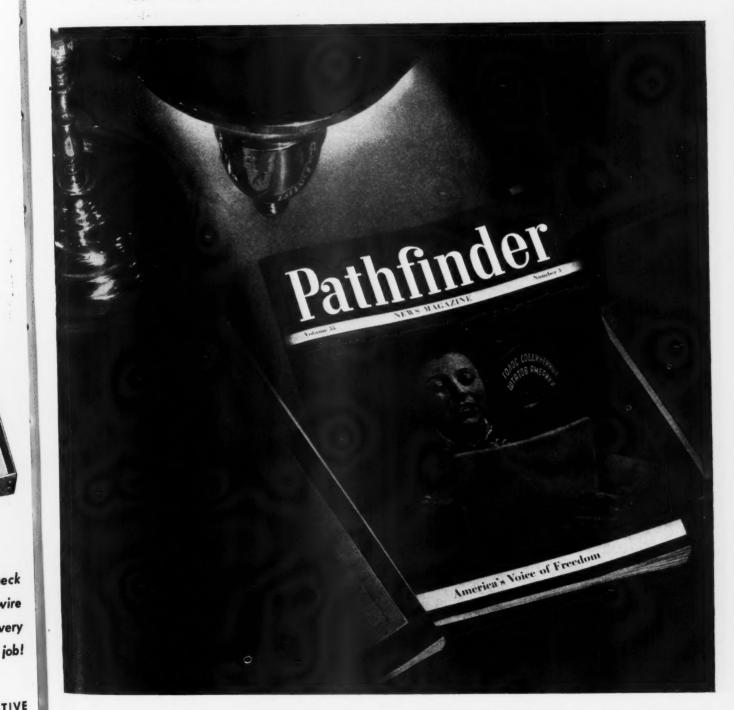
Add these features to the already outstanding list of Crescent-Wiry Joe Maroon Cable features and you have the *new* CRESCENT-WIRY JOE



WHEN NEXT IN OUR NEIGHBORHOOD, DROP IN—SEE HOW CRESCENT-WIRY JOE AUTOMOTIVE CABLE IS MADE FROM COPPER TO FINISHED PRODUCT IN ONE PLANT UNDER ONE ROOF

America's Second Largest News Magazine!

OVER 1,000,000 CIRCULATION OF HOMETOWN LEADERS



Also publishers of FARM JOURNAL-BIGGEST in the country

MOTOR AGE, January, 1949

job!

OOF

v. 1949

Go profit-wise

...with Modern Jacks, Engineered to Meet the Demands of Present Day Service

60% to 70% of all service jobs require lifting of the car. So adequate jack equipment is an absolute necessity for efficient, profitable use of your mechanics' time.

Car factory service managers have proven by actual time studies that obsolete and wornout jacks, as well as an insufficient number of jacks, steal untold hours of costly service men's time and countless dollars of shop profits.

Take a look at your own jacks. Do you have enough of them to avoid costly delays? Do they have the proper design and capacity? And, are they safe?

Don't squander another dime or another minute on any "klunker" jack in your shop. Go modern, go profit-wise and WALKER-IZE.

EVERY SHOP NEEDS THESE WALKER TIME-AND-MONEY SAVERS

Safe, powerful, trouble-free, these new, improved Walker *Greyhounds* earn their way on any service floor. Two models meet every shop requirement: No. 782, 2 tons capacity . . . No. 784, 4 tons capacity.

WALKER leads in

WALKER MANUFACTURING COMPANY OF WISCONSIN, RACINE, WIS.

and WALKER-IZE

...with the Increased Under-Car Accessibility of the New Wide Beam Electric Lift

Here is the new Walker Electric Lift, re-engineered to meet, even more adequately, the demands of modern service.

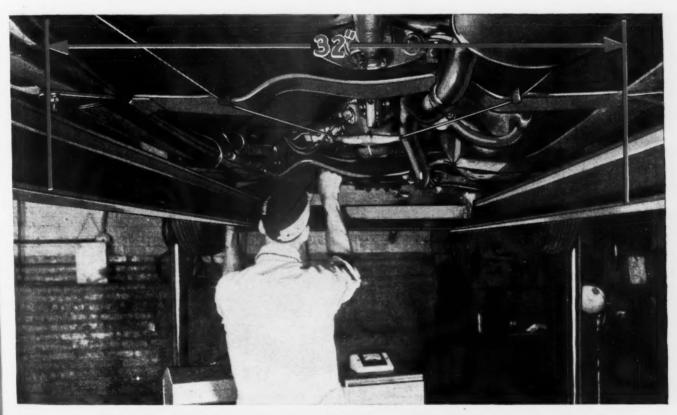
The new, extra wide beam spacing providing ten extra inches of working space between the beams was developed in cooperation with car factory service managers to provide maximum working space, increased under-car accessibility and broader utility—for maintenance, lubrication, undercoating, for any under-car service.

32 full inches of clearance places the beams under

the frame of the car—out of the way—bringing all under-car parts into easy working distance.

Take a good look at the under-side of this "Walker-Lifted" car and you will realize how the new extra wide beam-spacing now extends the famous Walker Open Work Zone from the floor to the bottom of the car.

Here is the finest investment any service operation can make. Here is greater profit insurance. Here is a piece of equipment that pays its way and pays a dividend.



... the lift with the Open Work Zone - always Open for Business.

LIFTING EQUIPMENT

ALSO MAKERS OF WALKER EXHAUST SILENCERS AND OIL FILTERS

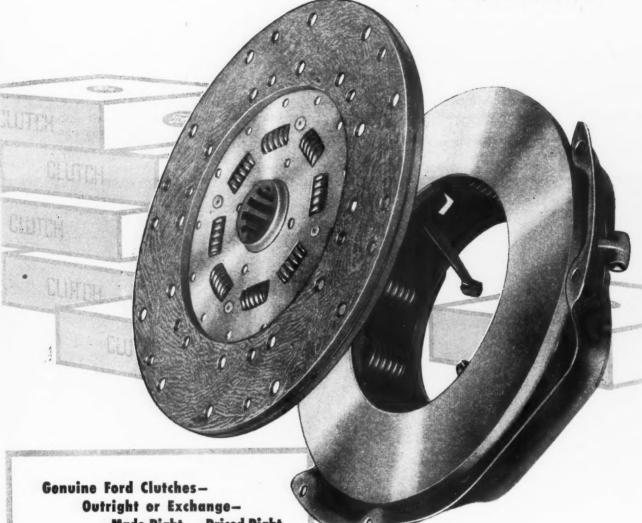
MOTOR AGE, January, 1949

ry, 1949

Naturally, Ford Owners Prefer

Genuine FORD Parts

They are right for Fords. They're made right to fit right and last longer. So naturally you get more Ford service business when you stock Genuine Ford Parts. Call your nearest Ford Dealer or Ford Parts Distributor-you'll find that stocks are ample, delivery quick.



Made Right ... Priced Right

Genuine Ford Clutches are balanced to prevent undue vibration and wear, assuring longer, trouble-free life even under extreme operating conditions. Especially designed for a given engine torque, exceptionally low pedal pressure is required for operation. Centrifugal weights attached to the release levers automatically increase the pressure against the disc as the engine speed increases, thus preventing slippage. For smoother, longer clutch life—always use the Genuine Ford Clutch.

Genuine FORD Parts...

Right for FORDS!



Independent Garages...

Put this Genuine Ford Parts Sign to work for you. Already outside thousands of garages from coast to coast, it brings in more Ford service business. Get all the details from your nearest Ford Dealer or Ford Parts Distributor today.

MOTOR

ALLEN Announces a NEW

DELUXE MODEL

CHARGER

ONLY

Slightly Higher in West

NEW-FIVE SECOND > **Battery Testing**

FW-Weatherproof Construction

NEW-Synchronous **Electric Timer**

NEW- Hi-Efficiency Transformer

NEVER BEFORE HAS ANYONE OFFERED YOU SO MUCH CHARGER FOR SO LITTLE MONEY!

The finest Fast Charger ever designed — precision engineered and field tested for a full year to assure you trouble-free operation.

Designed to give busy Service Stations and Automotive Shops years of profitable, continuous heavy-duty operation. It combines beauty and modern styling with rugged, compact construction.

FEATURES

5 SECOND BATTERY TEST: Entirely new, Solenoid controlled. Indicates battery condition to customer. A real new

METER: Large scale 0 to 100 amperes. Shockproof with D'Arsonval type bearings with external zero adjustment.

CONTROL AND PANEL COVER: Waterproof cover protects all controls from rain, snow and dirt.

CLOCK: Synchronous electric timer controls period of charge. RECTIFIER: Metallic, self-healing; stands overloads and shorts without damage. Guaranteed for 1 year.

TRANSFORMER: Rectangular wire wound under heavy tension on iron core for minimum vibration. Protected from

HI-LOW RATES: Seven Fast Charging rates and one Low Charging rate. Automatic switch to "finishing" rate.

WHEELS: Welded steel; 8"x2" semi-pneumatic oil resistant tires.

and for a Portable Auxiliary

INSTRUCTIONS

THE F-52!

Weighs only 35 lbs. — smaller than a battery. 75 ampere capacity with control for high and low charging rates. Take it anywhere - set it anywhere!



Sign

outfrom more

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s Dis-

NY

ry, 1949

ELECTRIC and EQUIPMENT COMPANY MICHIGAN











ALLEN Electric and Equipment Co.
2339 N. Pitcher St., Kalamazoo, Mich.
Please send us complete information on
the NEW Model F-200 Fast Charger . . . and the Model F-52 Portable Fast Charger.

Address_

State

MOTOR AGE, January, 1949



It's like something out of a story book — the way the new Blue Streak distributor head came to be. As if a service man made a wish, and presto! Blue Streak answered it.

The answer is in the new material known as Melamine.

There never has been — and there is no other insulating material in use today on distributors — which has the tremendous arc resistance that Melamine has.

When a spark flashes across the wet surface of an ordinary distributor head, it soon burns and carbonizes a path on the surface. This carbonized path then becomes a permanent conductor for the spark, and the head must be discarded. However, when a spark flashes across the wet surface of a Blue Streak Melamine distributor head, there is no burning — no destructive carbonizing.

These heads are another Blue Streak "first"... another safeguard for your reputation.

Your jobber has the new Blue Streak distributor heads with Melamine insulation — try one on your next order.

better your business...buy Blue Streak

STANDARD MOTOR PRODUCTS, INC., LONG ISLAND CITY 1, NEW YORK



SAVES LABOR

SAVES TIME

Does UNIFORM COATING

CASH IN NOW -

EVERY CAR NEEDS THIS SERVICE!

New cars—old cars—all cars need protective undercoating—and that's a whale of a big market for every automotive shop! Easy to sell this profitable service with its many advantages to car owners—improves riding comfort by sealing out drafts and fumes... deadens sound of road and engine noises... lengthens car life by preventing underbody rust and corrosion.

Equip right with ARO . This new ARO Underbody Coater does a speedy, efficient job! A complete outfit—ready to place on your drum of coating material and hook up to your air line. Includes an air-powered drum cover type pumping unit, hose for air and material, and a trigger-operated spray gun. The powerful pumping unit develops working pressure of four times air pressure used... operates at peak efficiency on minimum of air... reduces spraying time. Precision-built spray gun is light weight... trigger operated... especially designed to handle all undercoating materials. Write for Catalog 1175. The Aro Equipment Corporation, Bryan, Ohio.

ARO

UNDERBODY

ALSO - LUBE EQUIPMENT . . . AIR TOOLS . . . GREASE FITTINGS . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS THE ARO EQUIPMENT CORP., BRYAN, OHIO 149 Send us your catalog 1175 with complete information on Aro Underbody Coaters. No obligation.

NAME.....

ADDRESS

CITY____STATE___

MOTOR AGE, January, 1949

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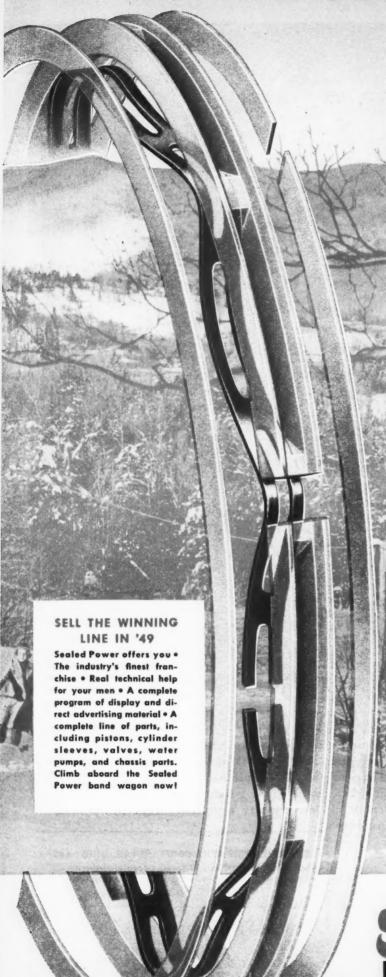
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31



Read what VERMONT says about SEALED POWER MD-50 STEEL OIL RING

The only ring with the FULL-FLOW SPRING

"Some of the junkers we re-ring are in pretty tough shape. We found that with Sealed Power Rings with the Full-Flow Spring we could control oil and give some of these old crates more power than they had had in years. We take pride in our Sealed Power ring jobs."

Rene Audette, Head Mechanic Mayo's Motor Mart, Burlington, Vt.

AMAZING ACCEPTANCE EVERYWHERE

From coast to coast, repairmen are praising the great new Sealed Power MD-50 Steel Oil Ring—the only ring with the Full-Flow Spring. From Vermont to California, from Minnesota to Texas, come enthusiastic reports: "Drains oil more freely with less clogging"..."Not a failure in 100 jobs"..."Does a much better job of oil control!"

BETTER OIL CONTROL BECAUSE:

TWICE AS MANY SLOTS



CURVES

for POSITIVE PRESSURE

GREATER BEARING AREA FOR LONGER LIFE



All these and many other exclusive features help the MD-50 Oil Ring SAVE OIL, SAVE GAS, SEAL POWER! They mean easier starting, longer life, more satisfaction for owners. Sell the greatest steel oil ring ever built. Sell Sealed Power! Talk to your Sealed Power Distributor. Sealed Power Corporation, Muskegon, Michigan.

NATIONALLY ADVERTISED IN:

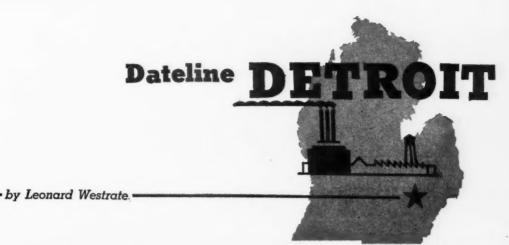
Saturday Evening Post Collier's Popular Mechanics Country Gentleman Successful Farming Progressive Farmer



Sealed Power

BEST IN NEW CARSI

BEST IN OLD CARS!



General Motors parts sales in 1948 ran about 16 per cent ahead of 1947 in dollar volume and about 10 per cent ahead in physical volume. Apparently the GM parts merchandising plan is bringing some results, but hasn't seriously upset the independent replacement parts industry.

Evidence appears in many places of a slight crack in the seller's market for automobiles. It still is too early to evaluate it as a definite return to a buyer's market, since the slowdown is spotty in nature. The real indication of the strength of the market will be more clearly evident after the normal spring upturn about next March or April.

+

As a result of a last big push by manufacturers, the U. S. automotive industry this year will come within about 80,000 vehicles of the all-time record hung up in 1929, when 5,358,420 vehicles were built. Passenger car output, however, will fall behind the previous peak by about 500,000 units. Truck production this year already has passed the all-time high, and will account for about 1.375 million of this year's estimated 5.278 million vehicles.

4

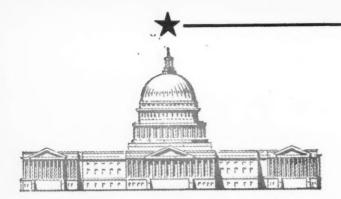
There seems to be more of a trend toward body service lines among jobbers. At least there appeared to be more of this slant at the ASI Show in December than was apparent at the preceding one. Obviously the new wider styling of modern cars with more sheet metal exposed is going to result in more work for body repair shops. Pontiac will drop its Torpedo line for 1949 and will replace it with a new model to be called the Chieftain.



A Federal court in Chicago was to hold a hearing Jan. 4 on two bankruptcy suits against Tucker Corporation. A third suit asking that the company be placed in receivership has been scheduled for Jan. 12. According to one report, an uncertified financial statement on Oct. 31 showed only \$255,000 cash remaining, although the company has many other assets. Various financing plans have been offered to keep the company solvent, including one which would have a prominent automotive leader (said to be James Mooney of Willys-Overland) run the plant with additional capital to be raised from private sources and a government loan.



Buick Div. of GM is finding demand for its Dynaflow transmission so heavy that it is planning to triple current output of 450 units a day by next March. The Dynaflow transmission now is being installed on all the Roadmaster series cars as standard equipment, and will be optional on the 1949 Super series.



WASHINGTON WIRE

Automobile manufacturers, garages and related industries may lose several thousand skilled workers to the reviving aircraft industry over the next few months. Former workers are now being recalled and experienced mechanics and welders will be recruited from industry in general. Women will be recruited and trained only as a last resort.

The Commerce Dept.'s iron and steel scrap drive committee is planning a series of trade magazine advertisements and editorial appeals to industry to make an extra effort to clean house. A special message is being prepared for auto dealers, urging them to junk all vehicles which have reached the end of their useful life. Safety features of getting obsolete vehicles off the highways will be stressed, and it will be pointed out that more scrap means more steel, and more steel means more new autos.

*

Providing materials are available, about a quarter-billion more will be spent on highways in 1949 than in 1948. Anticipated spending total will be in the neighborhood of \$1.8 billion, virtually all of it for improvement and maintenance of existing roads.



Washington labor experts don't look for any sharp rise in wages in the automotive manufacturing industry this year. The General Motors contract, which ties wages to the cost-of-living index is expected to hold down the aspirations of the union negotiators. The only assured increase in sight for GM workers is the regular threecents an hour improvement boost.

Consumer credit experts say that reinstitution of instalment buying regulations has already had desired effects in the auto industry. It is claimed that the used car business is going back to normal channels and, conversely, that the new car business is being driven back to new car dealers. September figures indicate, for the first time in many months, a slackening in auto sale credit, with only a 4 per cent rise. During October, the latest month for which figures are available, the expansion of auto sale credit was even slower, registering a gain of only 2 per cent over the previous month.

*

Retail articles priced at just under \$50 which are sold for more than \$50 because of regional sales taxes have been freed from the instalment credit regulations of the Federal Reserve Board.

Willys-Overland Motors, Inc., has purchased two surplus government-owned wartime manufacturing facilities at Toledo, Ohio, for \$861,881.50, War Assets Administration has announced.

It will use the properties for the manufacture of motor vehicles. During the war, the properties were operated by Willys-Overland to fulfill government contracts.





This is NO Time to Bunt

 $\mathbf{T}_{ ext{for those}}^{ ext{HIS}}$ great new year can provide unusual opportunities for those who are able and equipped to go after them.

To some, it seems apparent that the era of free spending in this market is dwindling to a quiet end. The car buyer is becoming a bit gunshy... and the car owner is counting his cash more cautiously when he buys service.

These signs should not be misinterpreted. They can easily mean a strong, healthy market which needs only sound sales cultivation to make 1949 a great merchandising year.

- 1949 opens with a continued strong demand for new cars, although the bloom is off the post-war peach.
- 1949 will provide a very good used car market with some downward price adjustments.
- 1949 should be a great year for general service business because more cars will need more service to provide more mileage than ever before.
- 1949 will mark the beginning of an expanded market for body service.
- 1949 will show enough replacement parts business for all who are willing to compete for their share of the market.
- 1949 service business will, as always, go to the shop best equipped with good workmen, proper tools and up-to-date equipment.
- 1949 will bring "plus sales" opportunities in accessories, supplies and automotive chemicals.
- 1949 means good business for alert businessmen. Men who know the rules of sound management and who practice them daily.

In preparing this special report on the Automotive Service Industries Show we are privileged to offer this Profit Preview for Forty-Nine.

We wish you the best in 1949! It's your opportunity . . . your turn at bat. You're UP! Remember: this is no time to bunt!



Frank Dight EDITOR.

1949

Tough Competition Hard Work ** Good Business



Bright Sales Outlook In Brake Service Field

Franklin A. Miller
Director Marketing and Merchandising
Raybestos-Manhattan, Ind.

WITH 41 million automotive vehicles on the road, 1949 offers a very bright servicesales outlook, particularly for brake linings, clutch facings and fan belts. Regardless of age, a vehicle cannot be operated without reasonable regard for maintenance, to safety standards, of the units using these products.

1947 and '48 new cars are fast coming into the market for brake service and 1942 and earlier jobs continue to require regular replacements. 1949, barring serious economic upsets, could well be an all-time high in the sale of brake service.

The possibilities of shortages of some of these products during 1949 depend greatly on the present unknowns of raw material availability, government stock-piling and the extent of armament programing.



"Here Is My If . . ."

Henry Lansdale
General Manager National Automotive
Parts Association

TO me all the automotive aftermarket factors indicate that 1949 total needs for repair and maintenance work and parts will be the biggest ever.

Motor Age is proud to present this digest of opinion expressed by prominent business leaders on the outlook for 1949. We asked a goodly number of men whose views are highly valued to state frankly what the New Year held for the car and independent service dealer. The result is this cross-sectional report indicating that 1949 business will be goodfor those who go after it.

Frank P. Tighe, Editor

What about parts supply? Well, there are now plenty of factory facilities and I have quite a bit of faith in the ability of the manufacturers to produce at least most of what is required, in spite of material shortages and a great many other problems.

Here is my "if." The extent to which the service and parts needs of 1949 will be translated into actual demand and buying will be considerably affected by general economic developments. I am far from considering myself sufficiently smart to predict what those will be, but believe that the sensible thing to do is to assume that they will be fair enough and to go ahead with plans and work for a good increase.



Competition Will Be Key-Note This Year H. B. Barrett

President Barrett Equipment Co.

WISH, particularly, to call attention of the automotive retailer, the car dealer, and the independent service dealer to what seems to us to be a return

of their pre-war and pre-depression complacency in their failure to recognize that the best-equipped shop gets the business, and that it is highly necessary to have a modern, well-equipped shop in order to service today's high-speed auto-

My advice to the automotive retailer is to pay close attention to personnel training in courtesy and efficiency, departmentalize, and hire if at all possibe, specialists in the various divisions of automotive service, and if not, have his employes well trained; modernize each department in his service shop to the point where it will command customer confidence and remembrance.



Dealers' Sales Effort Will Be Rewarded

J. E. Adams Vice-President The Toledo Steel Products Co.

IN my opinion the demand for repair parts in 1949 will be considerably greater than in 1948. New cars produced in 1948 were more than a million less than was forecast which means approximately a million old cars will remain on the highways which would otherwise have been scrapped.

We expect a considerable increase in our production of re-

Tough Competition: Hard Work: Good Business

CONTINUED FROM PAGE 37

placement parts in 1949 unless restrictions and allocation of necessary raw materials compel us to reduce production schedules thereby limiting still further our ability to meet the existing demand.

We believe the repair and service shops will be rewarded in 1949 in direct ratio to the amount of effort they expend to obtain service customers. despite the many obstacles which have hampered production almost continually since the war, we will succeed in establishing still another production record in 1949. Whether or not the seller's market which has prevailed since the war continues throughout the new year, we expect our dealers will be able to sell all the cars we can produce.

expected corporate excess profits taxes, plus the possibility of price controls, will unquestionably reduce corporate profits, resulting in reduction of dividends and expansion programs, which cannot help but retard business at a later date, possibly starting in the fall of 1949.



Studebaker Expects Another Great Production Year

H. S. Vance
Chairman & President
The Studebaker Corporation

HE year 1948 was the biggest production year in Studebaker history. Nevertheless, indications are that our dealers still have substantial backlogs of orders. In the hope that we might ease the situation, we began some weeks ago to make plans for a further appreciable increase in output beginning with the first quarter of 1949. We are going ahead with these plans and are hopeful that



Good Business Facing Factors That May Retard It

Steven B. Wilson
President Fram Corporation

CONTINUING high employment at present wages and an expected continuation of high level income for agriculture, plus increased Government spending for rearmament, should mean a continuation of business at or about its present level.

Shortage of materials, plus probable rationing and increases in labor rates, may cause further substantial increases in prices of manufactured goods.

Increased taxes, particularly



New Car Dealers Will Serve Importantly in '49

Robert W. Kneebone

Managing Director, National Automobile Dealers Assn.

THERE are definite reasons why business will continue good for new car dealers throughout 1949.

They are: Continuing high demand exceeds any possibility of supply. A survey among dealers shows the volume of unfilled orders in the first six months of 1948, was up 11 per cent.

Orders being received by manufacturers exceed the number of cars rolling from assembly lines.

So far in this decade, our national population has increased

16,000,000 — about 2,000,000 a year.

Our historic demand for cars has been at the rate of one for each four persons. This represents a potential market for 500,000 additional automobiles each year, indicating the great task of catching up to normal requirements.

So, at least for next year, though the public's position will be eased somewhat, the automobile dealers of this country will still be in a sellers' market.



Auto Transportation Vital To American Economy

Paul C. Johnson

Executive Vice President, Sealed Power
Corporation

B USINESS in general in the service field should continue at or above the level reached in 1948.

The post-war period and the war years have proven conclusively that automotive transportation is vital to the American economy. The market for automotive service and repair is the greatest in history, not only from the standpoint of increased registrations, but also

because the average age of cars is older and each vehicle is being driven more miles per year.

People are going to drive their cars and will have to keep them running — new car production will not fill the demand —old cars must be repaired. Therefore, the outlook for the Service - Repair business for 1949 is very bright.



"Barring Economic Setbacks—A Banner Year in 1949"

G. H. Goehrig

Vice-Pres. in Charge of Sales
Blackhawk Mfg. Co.

A LL factors within the industry appear to point towards continuing growth and expansion. These factors include the expected increase in vehicle registration, the heavy number of old cars requiring maintenance and repairing and the enlargement of distributing and servicing facilities to more ably serve the automotive aftermarket.

The renewal of old-time selling activities, the introduction of many new product lines and the opportunity for more aggressive merchandising undoubtedly will balance out any of the soft spots.

Barring either national or international economic setbacks, the Automotive Service Industry can anticipate a banner year in 1949.



Successful Business Hinges on Hard Work

M. E. Goldman
The Aitkin-Kynett Co.

BARRING the possibility of an international explosion, the outlook for 1949 appears to justify optimism for those who are prepared to appraise their individual problems and to accept the responsibilities for meeting them.

There is a steadily growing acceptance by management that the time has come for a return to the first principles of business administration. Successful business demands work — productive efficiency and efficient productivity. There is no substitute for conscientious effort on the part of every individual from the head of the business to the new employee on the bottom rung.

Customers are being revalued and recognized for what they are — the all-important assets of the organization. Costs of doing business are for the first time in a long while being scrutinized and subjected to controls. Attention to one's own business and prime consideration of its problems is being recognized as of more importance to the success of a business than opinions on world affairs.

(Continued on page 100)



by Arthur Roberts

REDIT agencies and consumer buying surveys report that many buyers have been working their credit possibilities to the limit. Some are exceeding their ability to pay. For this reason, automotive businessmen should be extremely careful in 1949 about extending credit to new accounts and should collect from old credit customers promptly. Time payment sales should be made with care. Consumer surveys report that many buyers have bought new cars, television sets, furniture and homes at inflated prices, are paying for them on time and are mortgaged up to the chin.

While this hazard to collection has been materializing, many automotive businessmen have been granting credit in slipshod fashion and collecting the same way. The reasons? Abundant currency in circulation and full employment at high wages are acting as a mirage. The situation holds dangerous consequences for the seller with heavy accounts receivable.

We are not attempting to Gallup by predicting that 1949 will be a bad year, but we believe that we are in the safety zone when we venture the opinion that

Out of cREDit in 1949

1949 won't be as much of a seller's market as prior years. One bad loss-leak in business when economy starts switching from a seller's to a buyer's market is high collection expense and bad debt write-offs. That's why the car and service dealer should start the New Year right by making a valiant attempt to col-

lect the unpaid accounts due him, not only the current delinquents, but those that have been on the books for a number of years.

In general, the unpaid accounts on the books may be classified as follows:

1—Unpaid because of legal barriers, such as deaths, bankruptcies or indigence.

2—Accounts barred by local statutes, usually when they are more than 6 years past due.

3—Unpaid because the debtors say they are unable to pay.

4—Unpaid because the debtors take their time about paying.

Discard those in the first group as out of the picture. Nothing can be done about them. However, you may persuade some of those in the second group to pay. It has happened more than once. At any rate, it won't hurt your prestige nor cripple your wallet to write such delinquents a friendly letter to the effect that all of us get into a financial air-pocket occasionally, but that time very often increases the bankroll, and inasmuch as considerable time has elapsed since the debt was contracted, you feel sure that the debtor's financial status has improved and you would appreciate a settlement. While there is still plenty of money in circulation, this appeal has possibilities. We can recall three cases where repairmen have collected in this fashion.

One repairman mailed 35 such letters to de-

Every dollar collected on a "bad debt" is 100 cents profit, and here is how to collect without

making a Simon Legree of yourself

linquent debtors barred by the statutes of limitations and collected 11 accounts totaling \$292. Six other debtors promised to settle in the near future. These written acknowledgments revived the legality of the outlawed debts. In most states, an acknowledgment in writing or a part payment on an outlawed debt revives

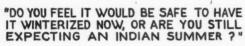
the creditor's legal remedy, so if you get an acknowledgment or part payment, and investigation discloses that the debtor is now in funds, consider the account a current asset and go after your money periodically with a systematic followup, even if the account has been written off. Always try to get an acknowledgment in writing if you can. A tactfully worded letter will often do the trick. Do not mention legal recourse. Maintain a friendly tone. Incidentally, if you collect on a bad account written off on your income tax return, be sure to declare the payment as income in the year received because you must pay a tax on it if the prior write-off gave you a tax benefit. Of course, if you file on a cash basis you can't deduct bad debts on your income tax return, and so, you need not again report the money received on a bad debt recovery.

Remember that there is more profit in collecting \$500 in bad or dubious accounts than in selling \$5,000 worth of automotive merchandise or service. Moreover, the sum salvaged from these receivables will help to offset increased taxes and overhead expense.

When you prepare a list of your unpaid accounts, it won't do any harm to include those going back 10 years or more. We know of repairmen who have collected very old accounts, even after they were written off, because they re-

(Continued on page 88)







"YES HE WAS GETTING FRESH AND YOU MIND YOUR OWN BUSINESS!"





NEWSCENE

Automotive Service Industries Show

Unfolds New Opportunities for Service Dealer thru Jobbers

THE ASI Show held at Navy Pier in Chicago is an opportunity for automotive wholesalers from all over the United States to see what makers of parts, equipment and accessories are presenting for next year. Although attendance is necessarily limited to prospective buyers, over 21,000 people this December passed through the turnstiles. These jobbers took home with them a knowledge of what nearly 600 manufacturers are producing. It is such knowledge of his field that enables the jobber to offer to dealers and independent shop operators intelligent service and sound merchandising advice.

Although the rush to place orders which marked last year's show, seemed this year to be lacking, on the whole the volume of business remained remarkably high, while the assurance of delivery of goods within a reasonable date meant more potatoes but perhaps less gravy than last year.

A significant difference between the 1948 Show and the one held in 1947 was that the jobbers are no longer in an uproar about the GM parts plan. After a year of competition with it, they have found that they still can compete by giving good service and by stocking more complete lines.



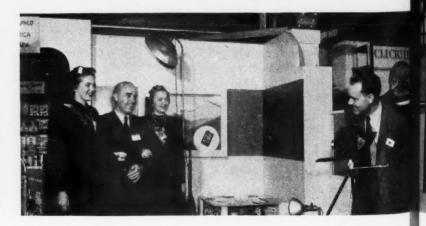
Above. Poor Miriam, of the N.S.P.A. Staff! She was walking past the Doyle Vacuum Cleaner exhibit when Pat Doyle, Vice-Pres. and Automotive Sales Mgr., tried to "pick her up".

Right. T. F. Hall, Sales Promotion Manager of the Walker Manufacturing Co., is shown here giving a demonstration of the relative backpressure of Walker Silencers.



Above. Peggy Gaffney (left) and Maxine Mayes, hostesses at the General Electric booth, listen to "G.E. Joe" as he compliments the girls on their novel corsages.





Above. Miles Powell, General Sales Manager of the R. M. Hollingshead Corp., poses with the Hollingshead Hostesses, Miss America and Miss Canada.



NEWSCENE





Right. Visitors at the Fram Exhibit relax and watch the crystal ball revolve, while a full line of Fram products is on display on the shelves. Left. Seen here at the Perfect Circle booth is a demonstration of the Plastigage, an item for checking bearing clearance, featured by the Perfect Circle Corporation.

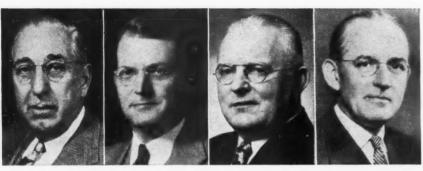
Above. Viewers at the Timken Exhibit watch an unusual display which points out the various functions of the Timken products being used for industrial purposes,



y, 1949

NEWSCENE

M.E.M.A. Officers . . .



At the yearly meeting of the Board of Directors of the Motor & Equipment Manufacturers Association the following were elected as the 1949 officers of the Association: for President—Bert G. Cochrane, Casco Products Corporation, Bridgeport, Conn.; for Vice President—E. J. Wilcox, J. H. Williams & Company, Buffalo, N. Y.; for Secretary—Franklin A. Miller, Raybestos-Manhattan, Inc., New York, N. Y.; for Treasurer (reelected)—Clyde P. Brewster, K-D Manufacturing Company, Lancaster, Pa.

N.S.P.A. Elects . . .



Members of the National Standard Parts Association, meeting in Chicago for their silver anniversary convention elected Charles R. Crowder, vice-president and sales director of Van Norman Company of Springfield, Massachusetts, president of the association for the 1949 term. He succeeds E. M. Sheehan, president of Motive Parts Company of Pennsylvania, Pittsburgh, who becomes an ex-officio

member of the board of directors for the next year.

Elected also as officers of the manufacturer - wholesaler association for the coming year are: G. W. Kleinschmit, an executive of The Automobile Equipment Company, Detroit, Michigan, who served as junior vice-president in 1948, to the office of senior vice-president; and C. C. Tapscott, advertis
(Continued on page 214)

Record Attendance Marks MEWA Annual Meeting

A record attendance of 1500 Motor and Equipment Wholesalers Assn. members were on hand for the annual convention at Chicago, last month.

M.E.W.A.'s President, Erle A. Henderson, President, Henderson Brothers, Sacramento, Calif., spoke on "Your Business Cost of Living." President Henderson in his address pointed to the increased cost of doing business which, under conditions of supply balancing demand signals the return of competition.

A symposium covering the subject of the service station market was held during the convention sessions with Rankin Peck, president (Continued on page 216)

Automotive Advertisers Council Makes Awards

The first annual awards for excellence in advertising by automotive wholesalers were announced last month by Walter A. Kirkpatrick, president of the Automotive Advertisers Council.

Awards were made by volume group: the first group being those concerns whose annual volume was over \$500,000. First award went to the Sieg Company, Davenport, Iowa.; second to the Richmond Auto Parts Co., Richmond, Va., and third, to Barron Motor Supply, Cedar Rapids, Iowa.

In the volume group ranging (Continued on page 214)

N.A.P.A. Members Discuss 1949 Expansion Program

At the twenty-fourth annual meeting of the National Automotive Parts Association in Chicago, last month, members heard broad discussions of N.A.P.A.'s long-range plan of advertising and sales promotion.

The story of N.A.P.A. and its service will be told to motor vehicle owners through national magazine advertising and supported by a continuing program in automotive trade magazines. The plan will be supported by a wide range of promotional and display material.

Profit Opportunities for 1949



in New Products

MOTOR AGE, January, 1949

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PROFIT OPPORTUNITIES in

STARTING, LIGHTING and

For Further Information Use Coupon on Page 82

The Thexton Mfg. Co., Minneapolis, Minn., is now marketing timing plates and a top-dead-center indicator for all Ford V-8 cars. The pair of timing plates consists of a pointer plate,

plates consists of a pointer plate, which is slotted to slide under two of the timing gear cover bolts, and a timing plate which fits on the pulley hub. The T.D.C. indicator screws into the spark plug hole, and operates by an electrical contact between the top of the piston and the point of the indicator. The indicator lights when the piston is at top dead center.

2

The Electra Manufacturing Company, Kansas City, Missouri, announces the new Electro Voltage Reg-

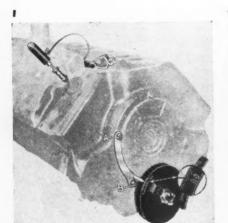
ulator. The outstanding feature claimed for the new regulator is the one-piece heavy gage "U" magnet frame used for each of the control units. This design is said to provide a regulator that will hold sensitive adjustments under adverse conditions. This regulator is automatic grounding, and offers full compensation for temperature variations. The manufacturer also states that this regulator uses gaskets which seal the unit from dust, moisture and oil fumes.

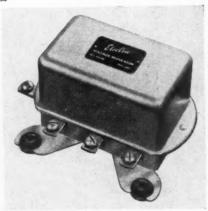
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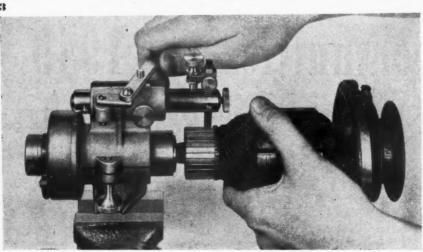
Rite Tool Inc., Fall River, Massachusetts, has developed a tool for truing and undercutting commutators. The manufacturer states that when truing commutators, the armature

must be gripped in a vise so that the end of the commutator projects from the vise jaws far enough to prevent the Tool Bit Locking Screw from striking the vise jaws as the commutator is turned down. Several sizes of collets are furnished to fit various standard generator shafts. For undercutting the mica on a commutator the tool is gripped in a vise so that the machine and armature are kept together as they were for truing. The length of the undercutting strokes may be preset for the correct length of the undercutting. The operation is completed by revolving the armature.

The Electric Auto-Lite Company, Toledo, Ohio, is featuring the Auto-









48

IGNITION

Lite Resistor Spark Plug. This plug, which utilizes the 10,000 Ohm resistor, is designed to have a wider gap setting than usual. This is said to improve the operation and increase electrode life. Radio and television interference also is suppressed within specified limitations. Auto-Lite continues in their regular line of generators, Transport Spark Plugs, and Steelductor ignition cable set.

The Lamp Department of the General Electric Company, Cleveland, Ohio, announces a new reflector-type automotive utility lamp. This can be used as a back-up light, when the light is mounted on a car or truck. When used in a holder designed for the pur-

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pose, with sufficient cord to reach any part of the car, it can be used for general utility purposes, such as changing tires at night.

The Baldor Electric Company, St. Louis, Missouri, is marketing the Handifast Battery Charger and Tester. This unit plugs into any 115 volt A.C. line and can be used for a discharge test on any six volt storage battery. It is claimed that this charger will charge a battery 30 minutes at a 80 ampere rate. A time switch is provided which permits automatic charges for one hour or less.

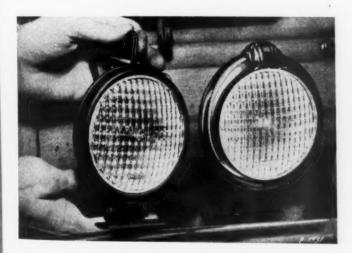
The Arsco Manufacturing & Sales Corporation, New York City, N. Y., is marketing four new products for use in the shop. Two of these products are test gages: the Arsco compound meter, which tests fuel pressure and manifold vacuum; and the compressometer, for checking compression. Also, newest in the line is the Mechanics Helper, a steel tool toter and service tray which is 24 inches long and 12 inches high. The fourth of these products is the Arsco Anti-Korode, a compound designed to dissolve and prevent corrosion.

Auto-Test, Inc., Chicago, Illinois, announces the marketing of the new

"daylight testing" power timing light. This light is said to eliminate special ignition timing test light conditions since its beam enables the mechanic to make on-the-spot tests in broad daylight. The basis of this new Auto-Test Power Timing Light's strength is its Sylvania-developed stroboscopic bulb. Auto-Test is also marketing an all-purpose extension switch, called the Test-Aid. The Test-Aid switch is said to enable the mechanic to make automotive tests without the help of an assistant to step on the starter or to throw the various switches for him.

The Machined Parts Corporation, Detroit, Michigan, is featuring two new replacement distributor caps. The Mapco No. 6891 will replace the cap on 1942 Ford V8's, and the Mapco No. 6894 replaces the cap used on 1946, 1947, and 1948 Ford V8's.

The K-D Lamp Division of the Noma Electric Corporation, Cincinnati, Ohio, announce that the KD Armored Clearance Lite is now offered with either brass or steel base. The manufacturer states that the new steel base Clearance Lite is offered at a cost under that of the same light with the brass base. The feature of the KD A541 Clearance Lite is that its patented clips, which hold screws and lens in the housing when the bulb (Continued on page 50)











y, 1949



PROFIT OPPORTUNITIES in

RAKE SERVICE

For Further Information Use Coupon on Page 82

Fabric," the brake lining is made by a new process. It is stated that in

manufacture, a greater number of strands of reinforced asbestos are per-

meated with more treatment than has

The L. J. Miley Company, Chicago, Illinois, is offering a process of bonded brake lining with the new Mileybond. There are several units available, the difference being in the size of the unit of the number of brake shoes they will turn out in a period of time. One of the features of the Mileybonder is that this equipment can likewise be used for de-bonding lining as well. The manufacturer states that there is no warm-up time required and it is automatic. The thermostat automatic control and timer operates the unit.

The Russell Mfg. Co., Middletown, Conn., has announced a new type of brake lining. Called Rusco "Fused

11

Grab and fade when wet or damp are said to be reduced to a minimum

hitherto been possible.

because of the water repellent charac-teristics of Fused Fabric. Slightly higher than conventional linings in original cost, Fused Fabric linings are claimed to give more miles of reliable

braking action.

13

The National Motor Bearing Company, Inc., Redwood City, California, has announced its National Oil Seal assortments, containing 116 selected seals for front and rear wheel bear-With each assortment comes an enameled cabinet for permanent oil seal storage. National offers two assortments, one of 116 seals for garages and major repair shops, and 58 seal assortment for service stations.

14

The Minnesota Automotive, Inc., Minneapolis, Minnesota, has developed the Mico No Stuk, an electrically operated solenoid valve which fits on the brake line between the rear wheels. When one wheel spins on snow or ice, the driver throws out the clutch and depresses the brake pedal to apply the brake and stop the spinning wheel. With the brakes on a dash switch activates the valve, and when the pedal is released the fluid flows back to the master cylinder. The brake remains on the spinning wheel and the wheel gets its traction.

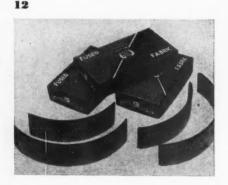
15

The Barrett Equipment Company, St. Louis, Missouri, announces four new items for presentation to the market. The first of these is its new market. The first of these is its new packaged, pre-cut Brake Lining Shim Stock furnished in universal size for all passenger cars. Second is a new Burring Tool, for removing burrs from the compensating port on reconditioned master cylinders. The third item is the Brake Shoe Centralizer for Ford and Mercury brakes. This item is designed to eliminate brake shoe drag and prevent brake shoe creep. It replaces the standard anchor pin plate on the brake assembly. Fourth is an eight-page folder on the Barrett Brake Drum Lathe Setup, consisting of two new models and two revamped models.

C. E. Niehoff and Company, Chicago, Ill., has announced its H-22 Service Stock, which offers a complete assortment of hydraulic brake parts with which to service all popular makes and models of cars and trucks. Thirty master and wheel cylinder kits, sixteen hoses, and twenty-one switches are stocked in the all-metal cabinet.

17

Lempco Products, Inc., Bedford, Ohio, are featuring along with their





other products in the line of shop equipment, the Lempco Pal brake drum lathe. This lathe is designed to help small shops to turn their own brake drums. The manufacturer states that the Lempco Pal will rough and finish out one drum every 5 minutes, with no further grinding necessary. It is said that it will take all passenger car and light trucks brake drums up to 5½ inches wide and from 8 inches to 14 inches in diameter. Also featured in the Lempco line of brake equipment is the Lempco brake shoe grinder. It automatically clamps the shoe into position so that the lining is ground in a true are, and it is claimed that a perfect contact is made

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between the lining and brake drum.

The Star Machine & Tool Company, Minneapolis, Minnesota, announce the Star No. 80 extra heavy duty power brake relining machine for trucks, buses, and all other heavy riveting jobs. Heavy duty riveting is accomplished by power; a touch on the foot trip treadle engages the clutch and power is furnished by 50 pound flywheel and a 1/3 h.p. electric motor. Other features of this unit are a 7½ inch wide brake shoe grinder, a countersinker, an automatic compensator which provides against overloading, ball bearing construction, a safety feature which prevents repeating while riveting or deriveting.

19

The Thermoid Company, Trenton, New Jersey, has added the "MD" Brake Sets (Manufacturers Duplicate) and a complete line of hydraulic brake parts and brake fluid to its line of products. The manufacturer states that Thermoid "MD" sets are designed to duplicate manufacturers' original type brake linings. They are boxed for passenger cars in complete sets which include the necessary rivets. Thermoid hydraulic brake fluid is available in pint, quart, gallon and five gallon cans.

The manufacturer states that it will mix with all recognized quality types of brake fluid, including those used by the car manufacturers. It is said that it will not harm rubber or metal parts and performs over the temperaturerange of 60° below zero to 230° Fah-

renheit.

20

The Automotive Division of Wagner Electric Corporation, St. Louis, Mo., announces an addition to its brake service merchandiser group, the allmetal four drawer repair parts and kit merchandiser. Contained in this new merchandiser are 83 varieties of Wagner brake service parts. This assortment includes wheel and master cylinder repair kits, hose, stop-lite switches, cups, and boots, all made to original equipment specifications. The new merchandiser is 18½ in. high and 25 in. wide. Drawers are divided into compartments with extra space provided for the stocking of extra parts necessary in individual cases.

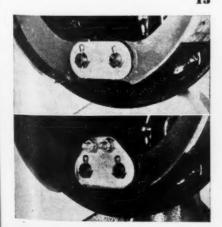
21

The Signal-Stat Corporation, Brooklyn, N. Y., is featuring its Signal-Stat Brake Lite for emergency brakes. This device is designed to signal the driver when he is driving with the emergency brake on. It consists of a small red pilot light which is installed on the dash, and a switch which connects to the emergency brake cable, and over to the ignition switch. When the ignition is turned on and the emergency brake is on, the circuit is complete and the pilot light lights.

The manufacturer also features its Signal-Stat directional signals and burn-out-proof switches for use on trucks, buses and passenger cars. The directional signals come in seven different models and are finished in black enamel or chrome.

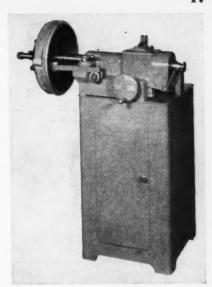
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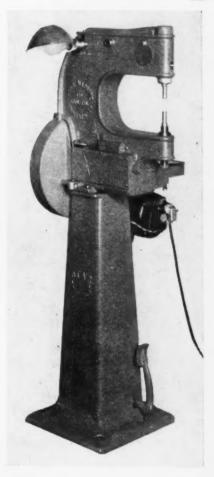


MOTOR AGE, January, 1949



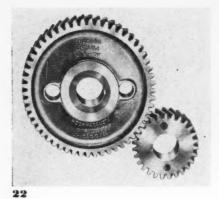


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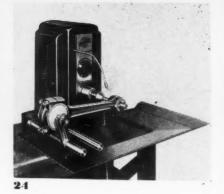


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PROFIT OPPORTUNITIES in

ENGINE REPAIRS . . .

For Further Information Use Coupon on Page 82



25



22

Hoof Products Company, Chicago, Illinois, has announced its aluminumsteel matched timing gear sets for Chevrolet, Ford V-8, GMC, Hudson, Studebaker, and Willys. The manufacturer states that the matched sets have been developed for silent performance and long gear life, and that the gears are sold only in matched sets. It is said that the gears are crown shaved for accuracy with a finish similar to tooth grinding used in aircraft production. A steel hub is permanently bonded to the aluminum gear to absorb shock and vibrations.

23

The Link-Belt Company, Indianapolis, Indiana, is featuring its self-adjusting silent timing chain, a no-backbend chain with segmental bushings. The spring segmental bushings are straight at the time of installation of the chain, and have just enough spring to take up the wear in the link gradually, as any wear occurs. The manufacturer states that the design is simple, and that the added features of No-Back-Bend (No-Whip) and Self-Adjustability to Wear are available at no increase in price.

24

Ammco Tools, Inc., Chicago, Ill., has made a new addition to its line. It is a special designed Wet Honing Machine for large tractor equipment, rods, and other parts. This machine, which according to the manufacturer, has been approved by John Deere, has one honing head which covers the en-

tire requirements of John Deere. This permanent type head is provided with four sets of standard coarse stones and four sets of special fine stones. The three short stones are equally spaced in the honing head, thereby assuring perfect work without the use of the truing sleeves. The automatic centering cone mounted on the honing head provides for true alignment when honing two holes in line. A foot pedal control permits the operator to use both hands to hold the work. The special honing oil is circulated by means of the separate motor driven pump set in the base of the machine.

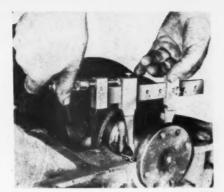
25

The Tobin-Arp Manufacturing Company, Minneapolis, Minnesota, is featuring the Model PM-100 Piston-Pin Fitting Machine. It is used for boring out the wrist pin bushing and the piston bosses to fit the wrist pins. It is also designed for use in boring the larger end of the rod, or may be held at the larger end of the bushing, boring it in alignment with the crank end of the rod. This is what is generally known as the diamond boring machine. The manufacturer states that this machine will permit the operator to give the exact amount of clearance he wants to any wrist pin, and he can do this work in one pass through a bushing.

26

The Waterbury Tool Division of Vickers Inc., Waterbury, Connecticut, has announced the Waterbury Hall





29

The Laminated Shim Company, Glenbrook, Connecticut, has developed a new convenience for the user of shim stock. A metal rack which holds any four gages of the company's 6 inch by 100 inch brass or steel shim stock rolls is now sold by industrial and automotive distributors. The stock is neglegated in thicknesses from 1001 is packaged in thicknesses from .001 inch to .012 inch.

30

The Cedar Rapids Engineering Company, Cedar Rapids, Iowa, has de-Engineering veloped its new lightweight valve seat grinder. One of the features claimed for this grinder is that it can be used at an angle other than vertical without imperfect grinding. The drive mechanism on this grinder is not rigid, and can to a certain extent be used at an angle. Grinding at an angle, within limits, will not bring the grinding stone out of a vertical position.

31

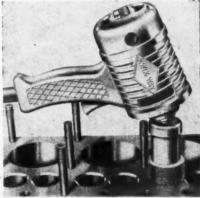
The McQuay-Norris Manufacturing Company, St. Louis, Mo., has an-nounced its Permasizer, a machine for expanding used pistons-iron and steel, as well as alloys—to the proper size for the worn cylinder through the use of an electric furnace method. This machine uses an internal expanding tool of special hard, stainless steel that allows the expansion of the complete skirt of the piston. This tool also makes it possible to restore the original cam shape of the piston. The manufacturer states that a piston resized by this method assumes permanent shape and will not collapse in use.

32

The Perfect Circle Corporation, Hagerstown, Indiana, has introduced Perfect Circle chrome rings. The chrome rings are top compression rings and are packaged for substitution in regular replacement sets at the request of the customers. The manufacturer states that the intro-duction of chrome rings to the replace-ment trade is the result of experience in chrome plating

(Continued on page 54)

29



30



28

Model 100 valve refacer. The manufacturer states that this new model is

heavier and more stable than the pre-

vious model, and features built-in wet

grinding with a double-compartment sump designed to give better coolant

settling and protection to valve and grinding wheel. It states that this machine will handle valves up to 5 inch head diameter, and that the workhead is doweled for 45 degree valves and can accommodate 15 degree

27 The Auburn Clutch Company, Division of Dana Corporation, Auburn, Indiana, are featuring the Auburn

Clutch which is now available for re-placement service. The manufacturer

states that incorporated into the

clutch is a patented cushion feature

which is designed to eliminate chatter. Also built into this clutch assembly is

ible-driven Auburn Clutch Plate hub

assembly is provided with a multiple number of load-carrying coil springs, each of which is individually damp-

a torsional vibration damper. manufacturer also states that the flex-

ened to eliminate gear rattle.

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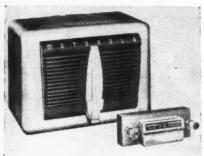
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Hall

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The Central Tool Company, of Cranston, Rhode Island, has recently announced a new Main Journal Mi-crometer No. 510 NEM which permits accurate measurement of crankshaft main journals without removing the crankshaft from the engine. This tool reads directly in thousandths of an inch over its entire range from zero to 5", and accurately measures journal wear or out-of-round.

MOTOR AGE, January, 1949



33



PROFIT OPPORTUNITIES in

For Further Information Use Coupon on Page 82

33

Motorola, Inc., Chicago, Illinois, continues to feature its full line of radios. The Motorola Model 705, an eight-tube set, has combined features of push-pull three-gang tuning, three-position tone control, and either instrument-panel or bulkhead speaker. This set incorporates a rectifier tube and is equipped with automatic volume control and a matched control head to fit every type of car. Also included in the Motorola line are the Motorola aerials, available to match every style of automotive bodies. There is a choice of styles for mounting on hood, fender, or cowl.

34

The American - La France - Foamite Corporation, of Elmira, New York, has announced a small size fire extinguisher called the Alfco Speedex. It is 3 9/16 inches in diameter with an overall length of 22 inches. It is designed for use in the garage, in the home, in automobiles, and similar places where a small fire extinguisher is desirable. Speedex carbon dioxide is said to be non-poisonous, non-corrosive, and odorless.

35

The Appleton Electric Company, Chicago, Illinois is featuring its 5 and 6 inch Model Sealed Beam Spotlights. The manufacturer states that these spotlights can be installed in approximately 20 minutes, and that all exterior parts are chrome plated. These spotlights can be had in either right hand or left hand installation, and each light comes complete with a universal bracket, drill jig, set of installation templates and instructions.

ta

The Gem Manufacturing Company, Chicago, Illinois, is featuring its Gem "Magic Glow" chrome plated hood ornaments. These ornaments, available in various designs for different makes and models of cars, give off a luminous glow of light, are made in a one piece casting and chrome plated.

37

The Anderson Company, Gary Indiana, is featuring the new SDL "Spot-Master" rear view mirror, with dioptrical (convex) lens. This new type mirror is designed to improve the

field of rearward vision and provide protection from headlight glare of cars on the rear.

38

General Electric's Lighting and Rectifier Divisions, Schenectady, N. Y., has announced the Vitalizer, a portable device which maintains automobile battery efficiency during cold weather for fast starting.

weather for fast starting.

Designed for over-night use during winter months, the Vitalizer is said to maintain chemical activity within the battery to keep its starting power at summertime efficiency.

The Vitalizer comes with two leads, one of which plugs into the dashboard cigar lighter receptacle and the other which can be connected to any 110-volt, 60-cycle, a-c outlet.

39

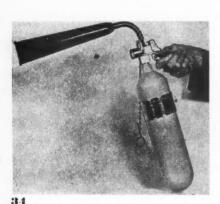
The York Safety Jack Company, Inc., York, Pennsylvania, has announced the Little Giant Safety Jack. The manufacturer states that this jack is built "like a bridge," embodying the cantilever principle which distributes the weight quality and gives balanced support. It is claimed that binding is completely eliminated with the use of the floating screw, bottom rollers, thrust bearings, and rollers under the top saddle. The base is 14½" x 4", which is designed to offer a solid foundation.

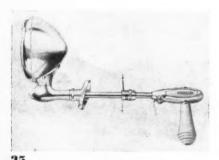
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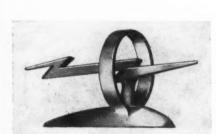
The Landis Manufacturing Company, Santa Monica, California, continues to feature the Jet Flow exhaust extensions. The manufacturer states that this is a modification of the venturi design employed in the aircraft field; as the car proceeds in forward motion, the Jet Flow funnels the air into and through the outer tube past the tail pipe outlet. This is said to set up a suction action, drawing exhaust gases through the tail pipe at a faster rate of speed, thereby reducing back pressure.

41

The Inland Rubber Company, Chicago, Ill., has announced its Inland Air Glide Tire. The manufacturer states that the Air Glide Tire gives superior riding qualities by carrying 12½ per cent more air under 14 per cent less pressure. The Inland tire







36



ACCESSORIES.

uses "Cool Twist" rayon cord, which is claimed to be 50 per cent stronger than cotton. The manufacturer also states that these tires are compounded of the new cold rubber.

42

The Stewart-Warner Corporation, Indianapolis, Indiana, announces the South Wind light-duty commercial heater. This is a complete heating unit requiring no installation kit. Features claimed for this heater are that it has a thermostatic heat control; creates its own heat independent of the truck engine, and within 60 seconds; recirculates air constantly; and can be installed easily in the most desirable position. The manufacturer states that this heater is suitable for installation in stand-up delivery trucks as well as in ambulances and light-duty panel trucks.

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The Park Chemical Company, Detroit, Michigan, announces the development of three new gasket cements plus a weatherstripping cement and a trim cement. These additions to their line include a hardening type cement, a non-hardening type which dries slowly and remains pliable, an aviation type for use with a brush. The Parko Weatherstrip Cement is said to be suitable for use in attaching rubber weatherstrips to windshields, cowl ventilators, etc., while Parko Trim Cement was developed for attaching fabrics to metals and woods.

The See-Mor Lamp Company, Cincinnati, Ohio, is now distributing the Polacoat rear view mirror. This polarized rear view mirror is designed to stop glare from the rear which reflects through the mirror. According to the manufacturer of the mirror, Koett Products Co., of Cincinnati, Ohio, it will cut light glare to 14.8%, whereas an ordinary mirror reflects 70% of all light striking it.

45

The Anthes Force Oiler Company, Fort Madison, Iowa, has added three new products to its line. The first is an adjustable extension mirror used and adjustable extension mirror used and adjustable extension mirror used and adjustable extension mirror used an adjustable extension mirror used and adju on trucks. The bracket will fit on hinges from 1½ to 3 inches, and the manufacturer claims that vibration is reduced to a minimum to the special bracket construction. The second on

the list is the No. 536 marker light, furnished with a 16-gage steel guarding rim, and with amber or red lenses. The third item is the No. 551 tail This is a combination stop and tail light, finished in black and with a 31/2-inch lense.

462

The Bolser Corporation, Cedar Falls, Iowa, is featuring in its line of truck flares, the Oil Burning Flare No. 53. Made of heavy gage steel and finished with baked enamel, these flares are claimed by the manufacturer to withstand the treatment encountered in heavy trucking use. They are arranged in a lot which nests three flares per unit. Also in their line of Oil Burning flares is No. 63, economy model, No. 73, Fairway model, and No. 92 called the Check-In-Box Flare.

47

The Walker Manufacturing Com-pany, Racine, Wis., announces their new Walker Oil Filter, with Laminar construction. The manufacturer states that the outstanding characteristics of the Walker filtering material are that it is uniform in structure and chemically pure; provides a filtering bed or matrix capable of removing foreign matrix capacie of removing foreign materials of micronic size; possesses a definite affinity for dirt, contamination and moisture; it is said to make possible a new principle of construction; and it makes possible an all filter cartridge of predetermined performance. Walker oil filters and replacent contributes are available for placent cartridges are available for all standard makes of passenger cars, trucks, buses, and tractors.

48

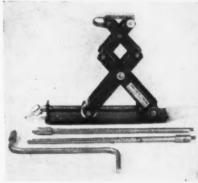
Stello Products Company, Hutchinson, Kansas, is featuring the Car Say-A-Mat. This floor mat, made of black or brown rubber, is designed to protect the car's floor from dirt, sand, and gravel. These mats are available in two sizes for all cars.

49

Barton Products, Chicago, Ill., announces Barton Liquid Radiator Cleaner. The Barton fluid is said to give relief to badly plugged radiators, is non-harmful to cooling systems and is said to handle radiator jobs without reverse flushing.

(Continued on page 56)





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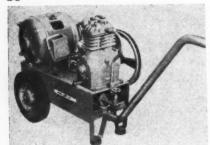
MOTOR AGE, January, 1949

PROFIT OPPORTUNITIES in

BODY, PAINT and TRIM . . .

For Further Information Use Coupon on Page 82

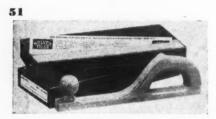
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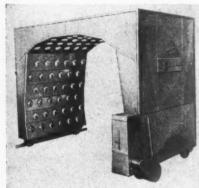
The Black Manufacturing Company, Baltimore, Maryland, announces the addition of a complete line of Air Compressors. The first two units of the line are both portable compressors, one for use with motors ranging from 1/3 to ½ horsepower, the other for use with motors ranging from ½ to 1½ horsepower.

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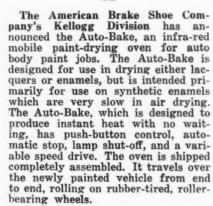


The Nolvex File Company, Cleveland, Ohio, is featuring its new U 4146 Set of Body and Fender Files and Holders. The manufacturer states that the Nolvex Holder furnished with this set is designed to afford proper balance, protection of the file teeth, and prevents breakage resulting from bending the file too much and keeping it under too much tension. The set includes six files plus the holders. The purpose of this set is to encourage the body and fender mechanic to purchase the six file blades at one time instead of one or two, since the holder is supplied without additional cost in this set.

52



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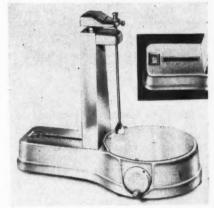
53

The Electric Sprayit Company, Sheboygan, Wisconsin, offers a number of new products for the automotive painting field. Among these products are included the ½ h.p. paint syrayer and high pressure compressor, which is equipped with wheels for portability; the Sprayit Pressure Paint Tank, for large scale production and refinishing in paint-

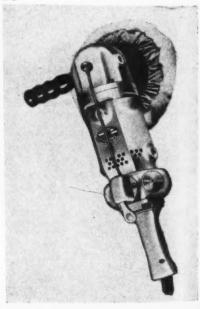
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nable in the 1/3 hine for and the n. The eting a ch is de-

ing shops and garages, obtainable in 2½, 5 and 10 gallon sizes; the 1/3 h.p. piston type spraying machine for smaller refinishing jobs; and the Sprayit Model SF spray gun. The manufacturer is also marketing a heavy material spray gun which is designed for use in applying under body coatings.

54

The Campbell-Hausfeld Company, Harrison, Ohio, announces the addition of the piston type single cylinder air compressor to its line of portable spray equipment. This unit is said to be suitable for paint spraying, touchup, and refinishing work. The manufacturer also states that it can be adapted to automotive lubrication and tire inflation use. The outfit comes complete with regulating valve, pressure gauge, 15 ft. of hose, spray gun, and 1/3 h.p. motor.

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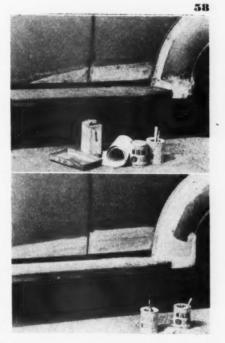
The Rinshed-Mason Company, Detroit, Michigan, has announced a new automotive color matching system. The instrument known as the Tintometer. The heart of the system is a measuring instrument graduated in thousandths, which permits the operator to combine base colors to arrive at a specified color match. The system also includes a book of formulas and the 20 base colors from which the formulas were compounded. Also furnished is a new type combination agitator, pouring spout, and air-tight cover.

56

The Van Dorn Electric Tool Company, Towson, Maryland, has announced new improvements in their line of portable electric polishers. Both the Standard and Automatic models have been redesigned. Gear reduction on both polishers has been changed to a single reduction spiral bevel gear, which has increased the power approximately 30 per cent and increased the speed of both units to 1500 R.P.M.

57

Trindl Products, Ltd., Chicago, Illinois, is marketing the Trindl Arc Welders. The latest Model 100 B welder, designed for use on limited capacity lines, is designed to work on iron, steel, brass, bronze, and other





metals from thin sheets to heavy construction welding. The manufacturer states that it delivers a smooth flow of welding current at all 16 heat stages ranging from 20 to 100 amps. The manufacturer also announces three other new welders to the market. Model 130 B, Model 180 B, and Model 180 C. Model 130 B is especially designed for use on rural power lines, while 180 B and 180 C are designed for heavy-duty maintenance construction and production welding.

58

The Gabriel Company, Cleveland, Ohio, has placed on the market Metalume, a metallic plastic. Gabriel Metalume is used as a filler or surface coating. It may be applied with a spatula or squeegee—or thinned out to the consistency of paint for brushing or spraying. Used in combination with this is "Celastic," a colloid treated fabric used to cover torn or rusted areas. When moistened with "Celastic" softener it can be hand-molded to any shape, and according to the manufacturer, it dries in the air to a metallic hardness. It may be sanded, feather edged and covered with Gabriel Metalume to effect a permanent repair.

59

The Breuer Electric Manufacturing Company, Chicago, Illinois, is now marketing the Breuer Tornado Automobile Vacuum Cleaners. These cleaners come in three models, one os 11/3 H.P., 1 H.P., and ½ H.P. Advantages claimed for this cleaner are large capacity, which enables the cleaner to pick up large stones or such articles which have been lodged in the crevices of the floor; strong suction, which is said to draw out both surface dirt, dust, stones and water, without causing damage to the sweeper and compactness and light weight. Weight of the ½ H.P. cleaner is 29 lbs.

60

The Smith Welding Equipment Corporation, Minneapolis, Minnesota, is featuring the Smith Lifelong welding equipment. One of the advantages claimed for this new equipment is that the welding tip slips into the torch body and may be swiveled in any direction depending upon the type of work being done. Also, back firing is said to have been eliminated because there is no pre-mixing or pre-ignition of the gases. It is claimed that an absolutely gas tight seal is made between the mixing section and the inside of the welding torch body head by the use of two synthetic rings. Because of this feature, it is not necessary to use a wrench in order to make a gas tight seal. Smith's Type K Generator is a two stage machine for the manufacture of acetylene gas. The generating chamber acts as the first stage and it is necessary that there be certain pressure fluctuation there in order for the machine to operate properly. These fluctuations are removed by a regulator at the outlet so that perfectly regulated pressures are obtained.

(Continued on page 58)

y, 1949



PROFIT OPPORTUNITIES in

SHOP EQUIPMENT and

For Further Information Use Coupon on Page 82

61



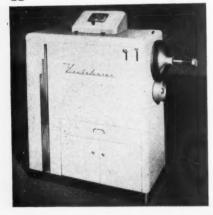
69



45 1

Everman Products, Inc., Bloomington, Indiana, is marketing the Thoro-Flush for cooling systems. The Everman Thoro-Flush is a tank-pump unit which attaches to the radiator filling vent. Used with the Everman Special Cleaner, it is said to clean the entire system including the radiator, water jacket, heater, and loosen all the rust, scale, sludge, etc. To use this unit, the radiator cap is removed and the overflow is plugged; the hose attachment is connected and the radiator is covered. The water and electrical connections are made, the engine is started, the cleaner is installed, and the rest is automatic.

63



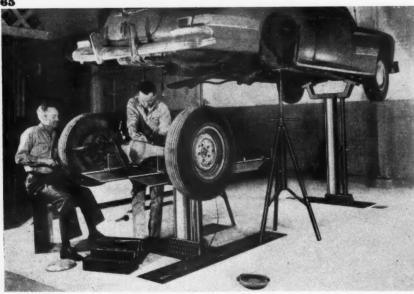
2.4



62

The Aro Equipment Corporation, Bryan, Ohio, is marketing an all-purpose tool kit. This kit, which includes an air motor in a pistol-grip type housing with attachments is designed for all types of automotive, bus, truck and aviation service shops. The speed of the air motor is adjustable from 700 to 2400 RPM and the manufacturer states that the tool is stall-proof at 90 lbs. pressure. The attachments include a five inch polisher, a four inch wire brush, a one inch hole saw, a quarter inch drill, and a carbon brush tool. The tool can be used for work such as polishing, compounding, sanding, sawing, wire brush work, etc.

85





installed on the Bear frame straightener No. 90 and wheel alinement racks Nos. 95 and 100.

65

The Joyce-Cridland Company, Dayton, Ohio, are marketing their Joyce Hold-A-Car adjustable chassis stand. These stands, which extend from a height of 60 in. closed to 73 in. extended, are recommended by the manufacturer for use with the Joyce "Shop-master" 2-Post Lift. When placed at one end of the lift under the chassis frame just inside of the tires, they permit the lift piston to be lowered while the vehicle remains in a fixed raised position. This is designed to simplify the removal of the axle assembly, drive shaft or other underchassis parts.

66

The Imperial Brass Manufacturing Company, Chicago, Ill., are introduc-ing new dealer stocks of tube fittings, flexible lines and attachable hose and fittings. Another new product being introduced is the "free wheeling" tube cutter. This new tube cutter is designed for use with copper, Bundy steel, brass, aluminum and other tubing on sizes from ¼ inch to 1 inch O. D., and is stated to be adapted for gas, oil, and brake line work. It features "free wheeling" ball bearing action which is said to make operation extremely easy.

Ruger Equipment Company, Inc., Cleveland, Ohio, announces the 3-Ton Hydraulic Floor Crane, with boom heights ranging from 4 ft. 7 in. to 10 ft. 10 in. This floor crane features a double acting, variable-ratio hand pump, the handle of which regulates the lifting capacity. By turning the pump handle to the right or left the pumping effort can be regulated so that any load up to full capacity can be lifted with ease. The load is lowered by opening a fine threaded release The steering wheels revolve

67

on Timken bearings and are 8 in. in diameter and 21/2 in. on the face.

The Magnus Chemical Company, Garwood, New Jersey, is marketing the Magnus Aja-Dip Junior Automo-Parts Cleaning Machine, for cleaning of small automotive parts such as pistons, carburetors, fuel pumps, etc. In the Aja-Dip Junior the parts are repeatedly agitated up and down approximately 72 times a minute, which is said to speed up the action of the cleaning solution. The action of the cleaning solution. The manufacturer states that almost any type of cleaning solution may be used in this unit, and that it will handle from 30 to 75 lbs. at a time.

69

The Walker Manufacturing Co., Racine, Wis., has announced a redesigned 4-post freel wheel type electric lift. Major change, according to the manufacturer, is extra wide spacing between the support beams which provides 10 extra inches of working space between the beams and more complete accessibility to all under-body parts of the car for maintenance and repair. (Continued on page 82)

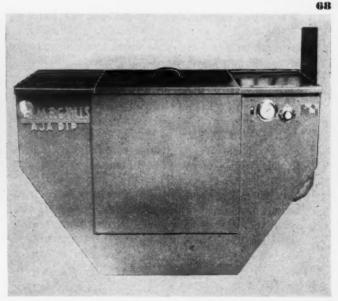
TOOLS

John Bean, Lansing, Mich., has just announced its new Bean Visubalancer, a machine which balances wheels statically and dynamically. A fluorescent screen points out how much weight is needed and where it is needed for dynamic balance. A pointer mounted on a flexible shaft indicates radial runout, and a vibrator is incorporated in the machine to give maximum accuracy in static balance, by reducing whatever friction may be present in the wheel bearing or in the shaft on which the wheel rotates. Built into the bottom of the unit is a parts cabinet in which the weights, tools, and so forth are housed. Also being featured by John Bean is a headlight tester for all models of passenger cars and trucks.

6.4

The Bear Manufacturing Company, Rock Island, Ill., announces its "New '49ers," the 115-88 wheel and steering service. Included in this service are an alinement rack, wheel aliner units, toe-in gage, tire scriber, pedal de-pressor, Flex-O-Power, camber corrector, and a hydraulic jack. Bear wheel aliner unit, as shown in the illustration, is a self-contained unit which is designed to handle cars with the new low fenders. The manufacturer states that the unit can be

MOTOR AGE, January, 1949





Valve-In-Head V-8 Engine is

Featured on the "98" Series

of the major features of the new Olds valvein-head V-8 engine, Oldsmobile Division, General Motors Corp., has made available more complete details of its advanced type of high compression engine. Although the version introduced for use in 1949 Oldsmobiles has a compression ratio of 7.25 to 1, the basic engine design is capable of progressive increases in compression ratio to the limit of 12.5 to 1 without major modifications. With a displacement of 303 cu. in. the engine develops a maximum of 135 hp at 3600 rpm.

In basic design, the engine features valve-inhead construction with a simplified system of valve actuation with a newly designed hydraulic valve lifter. The compactness of this arrange-

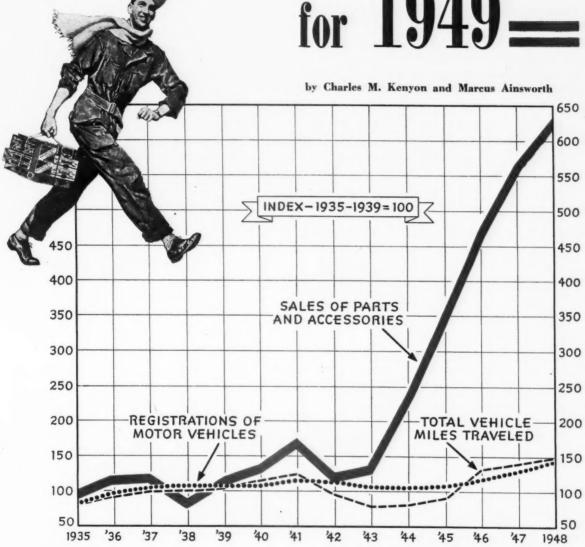
ENGINE SPECIFICATIONS

No. Cyl.								٠.	8
Bore									3-3/4"
Stroke .									3-7/16"
Displacen	nent								303 cu. in.
Compress	ion Rat	io							7.25:1
									263 lb. ft.
Maximum	Horse	001	we	r					135 at 3600
B.M.E.P.									131 lbs/sq. in.
Number	of Main	B	ea	rin	ıgı	5			5
Weight p	er Hors	ер	ov	vei	r .				5.52 lbs.
Weight o	f Engine						 1		745 lbs.

ment coupled with a slipper type aluminum alloy, invar-strut piston makes possible a relatively short stroke as compared with the bore and, in combination with short connecting rods makes for a low engine. This, in turn, has had a marked influence upon weight reduction.

Combustion chamber design affords ample room for valves of generous size, the intake valve at the head being 13/4 inches in diameter while (Continued on page 94)

Business Guide



PARTS and accessories sales are as closely related to the number of cars on the road and the miles they travel, as butter is to bread. And like butter which skyrocketed in price while bread increased steadily, the dollar value of repair parts and accessories rose at a phenomenal rate while both the number of cars on the road and the miles they travelled increased

steadily but at a reasonable rate. Inflation, scarcity of new cars, war dislocation of all sorts, can explain why the graph lines shoot apart, but that bend at the top may well mean that the lines are beginning to come together again. Sheer physical volume of demand, however, means that even in a falling market, the careful businessman should make good money in 1949, as he did in 1948.

: Business Guide for 1949 =

Forecast of 1948 Motor Vehicle Registrations

	PASSENG AND TA		TRUC	KS	BU	SES	TOTAL		PER CENT
STATE	1948	1947	1948	1947	1948	1947	1948	1947	INCREASE
Alabama	363,999	331,056	120,838	108,251	2.025	1,976	486,062	441,283	10.1
Arizona	153,160	142,708	44,000	42,295	750	1,041(1)		186,044	6.4
Arkansas	249,650	239,909	125,200	112,157	1,100	1,200	375,950	353,266	6.4
California	3,090,000	2,807,922	536,000	487,929			3,626,000	3,295,851	10.0
Colorado	372,000	325,472	119,800(1)	101,953	(2)	(2)	491,800	427,425	15.1
Connecticut	513,337	475,675	81,121	76,432	2,840	2,625	597,298	554,732	7.7
Delaware	68,490	61,154	20,460	15,913	(2)	(2)	88,950	77,067	15.4
District of Columbia	143,000	136,524	19,000	15,588	2,400	2,331	164,400	154,443	6.4
Florida	640,000	559,399	155,000	138,373	4,000	3,865	799,000	701,637	13.9
Georgia	540,981	499,631	164,439	150,108	5,100	4,986	710,520	654,725	8.5
Idaho	156,000	139,589	70,100	50,877			226,100	190,466	18.6
Illinois	1,925,000	1,753,109	310,000	282,125	40.000		2,235,000	2,035,234	9.8
Indiana	995,500	952,595	200,000	197,416	10,000	9,376	1,205,500	1,159,387	4.0
lowa	732,335	674,615	150,935	133,868	(2)	(2)	883,270	808,483	9.2 7.3
Kansas	574,593	535,637	179,940	167,366	(2) (2)	(2)	754,533	703,003	3.5
Kentucky	443,000	428,423	126,000	118,461 105,958	1	2,813	569,000 519,500	549,697 466,656	11.3
Louisiana	394,500 215.000	357,288 212,770	121,500 71,000	69,721	3,500 850	3,410 810	286,850	283,301	1.2
Maine	457,900	435,486	86,000	82,611	3.800	3,689	547,700	521,786	5.0
Massachusetts	950,000	890,128	153,500	144,113	5,760	5,794	1,109,260	1,040,035	6.6
Michigan		1,601,041	241.885	222,560	(2)	(2)	1,981,443	1,823,601	8.6
Minnesota	795,000	727,319	166,800	148,644	415	488	962,215	876,451	9.8
Mississippi	244,000	221,998	120,000	109,103	3,800	3,629	367,800	334,730	9.9
Missouri	862,000	829,152	215,000	209,997			1,077,000	1.039,149	3.6
Montana	146,000	131,783	68,500	63,871	(2)	(2)	214,500	195,654	9.6
Nebraska	396,600	370,471	100,000	98,296	850	625	497,450	469,392	6.0
Nevada	48,200	43,913	14,121	12.595			62,321	56,508	10.3
New Hampshire	125,500	114,608	40,000	35,663	(2)	(2)	165,500	150,271	10.1
New Jersey		1,032,763	194,016	186,794	9,500(1) 10,661(1)	1,306,222	1,230,218	6.2
New Mexico	123,140	112,194	44,000	41,062	1,000	883	168,140	154,139	9.1
New York	2,661,918	2,472,224	431,967	425,323	11,476	40,918(1)	3,105,361	2,938,465	5.7
North Carolina	657,700	615,574	169,892	147,703	2,900	2,957	830,492	766,234	8.4
North Dakota	174,000	152,208	74,000	60,777	200	323	248,200	213,308	
Ohio	1,980,000	1,965,307	280,000	270,284	3,700	3,611	2,263,700	2,239,202	
Oklahoma		463,971	161,000	143,078	5,500	5,286	669,300	612,335	
Oregon	446,267	405,015	134,199	115,845	1,504	1,640	581,970	522,500	
Pennsylvania	2,159,900	2,024,119	410,200	407,591	13,193	12,114	2,583,293	2,443,824	
Rhode Island	194,443	177,168	30,900	28,413	652	679	225,995	206,260	9.6
South Carolina	365,000	331,908	84,000	85,376	200	005	449,000	417,284	7.6 9.7
South Dakota	180,000	168,211	60,000	50,545	320	295	240,320	219,051	
Tennessee		476,056	141,000	124,826	E E04	0 500	662,400	600,882 2,052,500	
Texas		1,600,000	496,552	450,000	5,524 950	2,500 914	2,257,969 196,950	186,686	
Utah		148,624	40,000 15,200	37,148 14,818	165	171	109,365	107,673	
Vermont		92,684 564,676	152,805	132,996	2,100	3,019	767,263	700,691	
Virginia		572,259	150,000	132,996	4,600	3,537	781,700	700,031	
West Virginia	301,400	270,961	95,000	76,940	1,400	1,398	397,800		
Wisconsin	835,000	792,891	184,000	181,443		2,603	1,021,700		
Wyoming			37,000	27,341	2,700	2,000	122,000		
				27,041					
TOTAL	32,870,528	30,511,368	7,206,870	6,643,649	114,574	142,167	40,191,972	37,297,184	7.8

(1)—Includes taxicabs. (2)—Included with trucks.

NOTE:—These registrations are for the entire registration year, rather than just the calendar year, as it is believed that a more accurate count of vehicles registered will result from that basis.



Total Vehicle Miles Traveled in U. S.*

(All figures shown in millions)

	_			
	Passenger Cars	Buses	Trucks	Total Miles
1936	208,654	2,367	41,107	252,128
1937	223,467	2,492	44,151	270,110
1938	224,174	2,508	44,495	271,177
1939	235,629	2,554	47,219	285,402
1940	249,559	2,657	49,927	302,143
1941	275,685	2,820	54,891	333,396
1942	218,239	3,130	45,727	267,096
1943	161,788	3,365	41,594	206,747
1944	167,073	3,799	41,708	211,580
1945	199,599	3,758	45,987	249,344
1946	280,457	4,052	56,146	340,655
1947	298,824	4,251	65,768	368,843
1948†	318,154	4,400	71,276	393,830

^{*} Public Roads Administration.

The Motor Vehicle Production Record

(Factory Sales from U. S. Plants)

	Passenger Cars		Total Motor Vehicles
1929	4,587,400	771.020	5,358,420
1930	2.784.745	571,241	3,355,986
1931	1,973,090	416,648	2,389,738
1932	1,135,491	235,187	1,370,678
1933	1,573,512	346,545	1,920,057
1934	2,177,919	575,192	2,753,111
1935.	3.252.244	694,690	3,946,934
1936	3,669,528	784,587	4,454,115
1937	3.915.889	893,085	4,808,974
1939			
1938	2,000,985	488,100	2,489,085
1939	2,866,796	710,496	3,577,292
1940	3,717,385	754,901	4,472,286
1941	3,779,682	1,060,820	4,840,502
1942	222,862	818,662	1.041.524
1943	139	699,689	699,828
1944	610	737,524	738,134
1945	69.532	655,683	725,215
1946	2,148,699	940,851	3,089,550
1947	3,558,178	1,239,642	4,797,820
1948 (Est.)			
1040 (ESt.)	3,900,000	1,300,000	5,200,000

XCEPT for the two bottom years of the depression and the war years, there has been a steady increase in the number of motor vehicles registered in the United States; and the production record, except for the war years too, has shown in general a steady increase. Nineteen forty-eight topped all other years in total registrations with well over 40 million vehicles on the road. These cars were driven an estimated 393,830,000,000 miles, an astronomical total. The American people want cars and they intend to drive them many miles. Although the continued boom days of the post war period may soon give way to the rougher days of a tightening market, this solid demand for cars, parts and accessories yet remains. And the smart shop owner will continue to make money because he is selling a desirable product and rendering a necessary service.

20 Years of Motor Vehicle Registrations

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1929	23,060,421	3,442,087	26,502,508
1930	22,972,745	3,559,254	26,531,999
1931	22,420,629	3.573,267	25,993,896
1932	20,994,092	3,347,730	24,341,822
1933	20,557,493	3,292,439	23,849,932
1934	21,535,199	3,346,268	24.881.467
1935	22,513,715	3,644,997	26,158,712
1936	24.044.432	4.047.277	28,091,709
1937	25,356,786	4,292,484	29,649,270
1938	25,264,589	4,283,395	29.547.984
1939	26,147,798	4,496,770	30,644,568
1940		4,683,376	31,923,851
1941	29,240,417	4.911.990	34,152,407
1942	27,683,529	4,741,298	32,424,827
1943	25,841,215	4,657,882	30,499,097
1944		4,611,966	29,910,605
1945		5,025,233	30,424,057
1946		5,858,813	33,693,356
1947	, ,	6,785,816	37,297,184
1948 (Est.)		7,321,444	40,191,972

[†] Estimated by Motor Age.



THE dollar volume of parts and accessories sold in the United States in 1948 was infinitely greater than it has ever been before. Against the \$600 million increase of 1947 over 1946, however, 1948 showed an increase of only \$260 million over 1947. Much of this increase can be accounted for by the rise in prices; units sold in 1948 probably will not exceed the total units sold in the U.S. in 1947. Although the number of retail outlets increased from 101,762 in 1947 to 107,626 in 1948, it has not yet begun to approach the 171,847 outlets which existed in 1930. Furthermore, in spite of the increase in number of outlets, the average number of motor vehicles per outlet rose to 373 from 295 in 1947. Both of these increases show the continued existence of a huge market and should be weighed heavily in making advertising plans and in estimating service sales for 1949.

Wholesale Value of Repair Parts and Accessories Production, 1933-1948

Year										Wholesale Value
1933.										\$234,461,000
										304,642,000
1935.										378,323,000
1936.										448,527,000
1937.										464,619,000
										348,068,000
1939.										454,673,000
										553,004,000
40.44										718,212,000
1942										471,957,000
1943										527,710,000
1944										816,724,000
1945										1,284,926,000
1946										1.752.918.000
1947.										2,353,523,000
1948*										2,620,000,000

^{*} Partly estimated.

The above data are based on Federal Excise tax collections. The excise tax does not apply on parts and accessories exported, so these values apply for domestic sales only. Prior to July 1, 1944, sales to U. S. government were not subject to the tax, but have been since that date.

1948 Wholesale Sales of Parts and Accessories*

Alabama	\$31,684,991	Maine	18,698,931	Oklahoma	43,629,759
Arizona	12,901,187	Maryland	35,702,997	Oregon	37,936,960
Arkansas	24,507,105	Massachusetts	72,309,487	Pennsylvania	168,397,557
California	236,368,645	Michigan	129,164,677	Rhode Island	14,731,968
Colorado	32,059,035	Minnesota	62,724,044	South Carolina	29,269,026
Connecticut	38,936,148	Mississippi	23,975,830	South Dakota	15,665,773
Delaware	5,798,384	Missouri	70,206,549	Tennessee	43,179,961
District of Columbia	10,716,766	Montana	13,982,642	Texas	147,190,617
Florida	52,084,525	Nebraska	32,427,343	Utah	12,838,607
Georgia	46,316,767	Nevada	4,062,519	Vermont	7,129,176
Idaho	14,738,781	New Hampshire	10,788,472	Virginia	50,015,681
Illinois	145,693,332	New Jersey	85,148,876	Washington	50,956,787
Indiana	78,583,097	New Mexico	10,960,566	West Virginia	25,931,444
lowa	57,577,784	New York	202,429,677	Wisconsin	66,601,701
Kansas	49,185,743	North Carolina	54,137,398	Wyoming	7,952,831
Kentucky	37,091,483	North Dakota	16,179,448		
Louisiana	33,864,719	Ohio	147,564,204	Total	\$2,620,000,000

^{*} Estimated on basis of value of sales per motor vehicle times the motor vehicle registrations of each state.

Business Guide for 1949

Automotive Wholesalers, Dealers and Repair Shops, by States*

With Number of Motor Vehicles per Outlet

		WHOLE	SALERS	DEA	LERS		SHOPS		RETAIL LETS †
STATE	Total Motor Vehicle Regis- trations	Number of Whole- salers	Motor Vehicles per Whole- saler	Car and Truck Dealers	Motor Vehicles per Car and Truck Dealer	Inde- pendent Repair Shops	Motor Vehicles per Repair Shop	All Retail Outlets	Motor Vehicles per Retail Outlet
Alabama	486,682	132 .	3,682	498	976	374	1.300	915	531
Arizona	197,910	62	3,192	217	912	320	618	567	349
Arkansas	375,950	128	2,937	526	715	539	697	1.114	337
California	3,626,000	699	5,187	2.206	1.644	5.707	635	8,892	408
Colorado	491,800	94	5,232	514	957	685	718	1,269	387
Connecticut	597,298	120	4,977	544	1,098	711	840	1,362	438
Delaware	88,950	17	5,232	90	988	126	706	229	388
Dist. of Columbia	164,400	24	6,850	72	2,283	135	1,217	238	691
Florida	799,000	159	5,025	617	1,295	652	1,225	1,338	597
Georgia	710,520	164	4,332	690	1,030	386	1,841	1,118	636
Idaho	226,100	72	3,140	385	587	369	613	822	275
Illinois	2,235,000	453	4,934	2,493	896	3,168	705	6,225	359
Indiana	1,205,500	230	5,241	1,333	904	1,736	1,694	3,214	375
lowa	883,270	212	4,166	1,378	641	1,172	754	2,796	316
Kansas	754,533	158	4,776	991	761	841	897	1,893	398
Kentucky	569,000	141	4,035	716	795	472	1,205	1,224	465
Louisiana	519,500	103	5,044	476	1,091	427	1,217	941	552
Maine	286,850	54	5,312	413	694	559	513	1,043	275
Maryland	547,700	97	5,646	443	1,236	452	1,212	947	578
Massachusetts	1,109,260	222	4,997	1,176	943	1,351	821	2,777	399
Michigan	1,981,443	329	6,023	1,824	1,086	2,654	746	5,109	388
Minnesota	962,215	160	6,014	1,553	620	1,570	613	3,504	275
Mississippi	367,800	99	3,715	518	710	216	1,703	755	487
Missouri	1,077,000	261	4,126	1,217	885	1,360	792	2,676	402
Montana	214,500	62	3,460	460	466	319	672	827	. 259
Nebraska	497,450	119	4,180	753	661	798	623	1,636	304
Nevada	62,321	15	4,155	107	582	119	524	242	257
New Hampshire	165,500	26	6,365	245	675	292	567	559	296
New Jersey	1,306,222	224	5,831	1,065	1,226	2,263	577	3,512	372
New Mexico	168,140	62	2,711	242	695	338	497	622	270
New York	3,105,361	566	5,486	2,779	1,117	5,877	528	9,229	336
North Carolina	830,492	212	3,917	907	916	818	1,015	1,791	464
North Dakota	248,200	50	4,964	472	526	414	600	954	260
Ohio	2,263,700	451	5,019	2,124	1,066	2,312	979	5,027	450
Oklahoma	669,300	182	3,677	866	773	1,002	668	1,968	340
Oregon	581,970	125	4,656	558	1,043	1,206	482	1,906	305
Pennsylvania	2,583,293	547	4,723	3,128	826	5,291	488	8,956	288
Rhode Island	225,995	34	6,647	159	1,421	269	840	493	458
South Carolina	449,000	98	4,582	446	1,007	346	1,298	811	554
South Dakota	240,320	45	5,340	402	598	315	763	770	312
Tennessee	662,400	146	4,537	611	1,084	520	1,274	1,166	568
Texas	2,257,969	505	4,471	2,470	914	3,295	685	6,003	376
Utah	196,950	62	3,177	246	801	360	547	655	301
Vermont	109,365	21	5,208	198	552	254	430	476	230
Virginia	767,263	123	6,238	815	941	823	932	1,718	447
Washington	781,700	173	4,518	812	963	1,855	421	2,935	266
West Virginia	397,800	84	4,736	551	722	456	872	1,088	366
Wisconsin	1,021,700	186	5,493	1493	684	1,263	809	2,908	351
Wyoming	122,000	35	3,486	239	510	140	871	406	300
Total	40,191,972	8,343	4,817	43,038	934	56,927	706	107,626	373

^{*} Trade List Department—Chilton Company.
† In addition to car and truck_dealers and independent repair_shops, this count includes exclusive specialty shops, body shops and accessory stores.

1948 New Car Registrations by Makes by States*

AND MO				Chev- rolet	hrys- C		De Soto De	odge F	ord F	Frazer	Hud- son	Kaiser		Mer- cury	Nash	Olds- mobile	Pack- ard	Ply- mouth	Pon- tiac	Stude- b aker	Willys	All Others	Total
bama	Oct. 10 Mos.	238 1538	366	1163 8340	83 769	17 266	498 1	485 5	262 950	61 581	96 1053	183 1159	44 232	211	53 798	198 1311	32 328	459 3488	60 1658	167 1259	13 198	8 32 3	4,84 32,48
rona	Oct. 10 Mos.	39 664	14	123 1724	326	13 97		526 1	149 350	179	260	17 264	113	398	13 454	26 387	216	887	31 547	85 809	69	20	9,70
ansas	Oct. 10 Mos.	144	32 183	684 4983	53 483	6 57	38	95	681 575	40 363	56 515	90 831	24 143	736	26 519	84 778	35 268	247 1987	139 1068	97 574	21 214	20 27 37	2,68 19,57
Ifornia	Oct. 10 Mos.	1708 15968	485	4655	504	135	781 1	1124 4	858	45 2520	538 7183	489 4423	383 2606	1464 9590	160 5826	935	417	1618 17989	1449 14038	1296 13488	69 1158	176 1793	23,28
rade	Oct.	174	42	499	87	3	32	104	531	29 509	61 682	80	53 210	142 1122	30 737	114 1043	38 27	185 2233	134 1244	64 670	10 142	2	2.4
ecticut	10 Mos. Oct.	1589 388	400 156	4920 840	962 103	16	112	226	656	18	120	609	77	246	25	246	83	334	304	181	18	54 48 674	4.2
ware	10 Mos. Oct.	3492 44	1200	7325 162	1151	242	16	48	180	441	1318	876 22	528 11	1763 36	1810	2413 45	1173	3619 63	3313	41	230	. 7	41,1
of Col	10 Mos.	588 140	143 73	1466 452	181 58	19	170 32	145	1141 329	114	59 602	270 37	72 16	322 120	243 8	534 133	230 52	706 278	573 154	91	12	98	8,1 2,2
da	10 Mos. Oct.	1484 201	541 117	4154 685	593	115		1678 2	2289 1181	166	602 90	395 91	162 72	679 241	534 13	1119	623 46	2952 304	1642 219	132	80 27	232 24	21.
gla	10 Mos. Oct.	2595 286	1112	7920 1098	1365	820		2869 7	7600 1157	733 23	1419	1400 139	741 43	2361 224	1400	1734 163	786 63	4475 370	2260 251	1636	321 18	178	44.
	10 Mos.	3625 99	786 13	11691	1222	355		2622 10	0174 255	701 30	1420	1407 65	413 15	2168 46	1512	2122 45	812 18	5210 76	2699 77	2190	358	10	82. 1.
)	Oct. 10 Mos.	784	124	2241	417	38 138	267	633 1	1559	483 134	373	627 834	74 305	427 1114	402 86	474 1050	183 348	1006 1515	580 1124	751	85 60	87 417	11.1
is	Oct. 10 Mos.	1464 16313		3294 39818	6307	2052		3697 2	3285 2861	5521	433 5885	9857	2014	8852	6383	11554	5065	20814	13064	7702	1141	1112	210.
na	Oct. 10 Mos.	635 5557	151 1244	2020 17846	220 2290			4729	1858 9812	1981	224 2583	356 3539	96 469	429 2849	2233	538 4549	111 1526	740 7874	652 5271	7482	32 482 16	148	85,
******	Oct. 10 Mos.	380 3239	83 562	1402 13119	124 1612	39 354	84 842	2733	1573 8474	105 2338	134 1587	354 3450	273	266 1821	52 1212	218 2172	1088	556 5633	267 2865	2018	311	13	6. 65.
M8	Oct.	257 2369	51 348	1090 9567	113	60 456	59	178	969 5628	66 1378	138 1360	206 2174	44 251	202 1416	1193	192 1986	44 685	377 3831	236 2402	144	19 211	24	40,
ucky	Oct. 10 Mos.	230 2132	43	834 8041	71 1062	30 429	52	118	805 5067	20 593	68 952	115 1232	25 233	169	52 837	131 1699	41 621	259 3514	159 1900	124	21 320	29	33,
ilana	Oct.	208	71	805 7743	59	20 244	45	121	952 6696	28 689	86 1138	102 1359	43 276	1384 164 1471	29	140 1588	45	324 3869	207 2170	150	25 276	113	38,
0	Oct.	1989	532 30	270	993 34	6	24	78	254	14	36	37	18	71	988	73	552 34	109	125 1153	5 40	10	9	14
yland	Oct.	1008 280	219 76	2775 1084	368 120	95 40	343 88	219	1878 867	128 29	515 118	326 123	120 32	489 207	831 35	194	68	1388	266 2984		24 238	82 20	4.
sachusetts		2846 668	693 216	10440 1281	1239 205	356 42	219	439	5081 1267	518	1412	1407 145	95	1236 485	1515	619	830 123	4453 741	667 7060	1976	42	176 67	43,
ilgan	10 Mos.	7213 1771	1898 417	14149 4414	2439 533	839	2290 460	1183	9158 5803	30 734 161	2706 738	1961 766	849 219	3848 1260	3551 150	1596	2030 370	8323 2041 15799	1614	4 363	497 76	734	88. 24.
neeota	10 Mos.	18739 423	4185 76	41838 1386	4939 171	768		10666 2	7935 1151	3442 76	7316 151	7085 271	1575 52	8434 230	5666 74	13676	4728 88	15799 539	16821 312	1 4251 2 264	895	601 45	203
iselppi	10 Mos.	4365 139	685 35	14624 537	2369 62	441 24	1117	3582 57	8842 610	1492 24	1931	2925 68	313 24	1868	1949	2949	1105	539 7275 213	3754	4 2792	389 15	379	65. 2.
• • • • • • • • • • • • • • • • • • • •	10 Mos.	1248	278	5276	710	167	270	912	4063	338 36	811	737	165 54	858 228	588	813	265 81	213 2611 567	1219	9 731	121 26	24 68 4	22
ouri	Oct.	379 4711	1030	1585 20498	120 2150	672	1418	214 4088 1	1477	1314	125 2120	198 2607	472	2558	2097	3873	1140	567 7927	4195	5 2431	539	17	77
taŋa	Oct.	941	188	285 2908	33 490 74	33	13 284	938	342 2129	32 449	35 422	93 723	16 92	70 588	16 518	815	309	1340	823	3 799	149	16	14
raeka	Oct. 10 Mos.	160 1621	33 270	651 6650	1038	10 128	37 398	105 1268	745 4963	48 839	64 838	149 1582	31 164	124 968	13 581	997	33 446	297 3376	167	5 1042	215	16 3 34	29
nda	Oct.	38 314	24 138	52 598	22 222	4	11 141	35 288	79 471	109	118	8	65	44 261	109	14	139	441	288	8 314	25	3 5 5	4
Hamp	Oct.	66 629	16 130	179 1715	22 221	105	14 200	52 627	146 1061	95	23	32	11 59	42 265	317	63	224	87 914	633	3 315	11 72	62 134	8
v Jersey	Oct.	772 7635	271 2158	1740 16390	206 3272	50 783	183 2257	480 6832	1446 8232	33 1396	254 189 3097	314 3294	184 1196	673 4505	3031	550 5196	167 2490	609 8510	916	8 359	39	134 1301	94
Mexico.	. Oct.	57	22	208	29	8	11	31	198	13	17	51	20 79	50	6	37	18 148	62 794	5	1 30	5	2	8
v York	Oct.	574 2481	1001	1852 5022	376 790	125	708	481 1696	1316 4363	253 130	722	727	443	368 1524	180	1939	635	2310	247	5 970	142	468	28 282
th Carolin		24567 299	7615 76	46751 1189	9073	2034	9354	173	28196 1306	4032	114	190	3076 60	10650 273	8998	198	9406 58	24583 323	24	5 194	28	4712 38	4
th Dakota	10 Mos.	3149	651 13	11124 333	994	254	792 36	2501 45	7844 361	842	30	110	335	1798 61	1188	7 2020	793 11	4419 158	7	9 69	7	278	47
0	10 Mos.	558 1660	79 347	2424 4187	379 532	23 106	243 445	450 1040	1914 3560	293 117	269 605	515	38 193	318	293	3 409	92 300	1521 1969	130	1 630	118		10
ahoma	10 Mos. Oct.		2980	38974 901	5428 67	1709 23	4379		20683 844	2787	5615 52	5744	1332	6708	5561	1 9963	3388	17454 273	1258	9 6306	1282	250	170
gon	10 Mos.		463 41	8999	1035	196 16	617 42	1612	5403	615 29	999	1053	221	1375	102	2 1548		3393 214	219	1 1109	245	19	3
	10 Mos.	2233	384	689 6801	939	361	858	139 1800	568 3991	795	945	1246	261 209		98!	5 1525	808	2602	196	36 2029	9 185	152	3
insylvania.	10 Mos.	1532 15422	420 3326	4052 40000	526 7458	1219	427 5860	901 14485	3255 20512	83 2659	6318	5931	1522	7316	748	1 11742	5388	23950	1383	38 9800	6 1129	705	20
ode Island	1. Oct.	123 1205	43 289	239 3021	34 508	91	35 385	1005	179 1508	183		383	23	85 598	84	8 1098	262	1611	1110	08 94	5 87	102	1
th Carolin	10 Mos.	1113	37	674	39 519	138	28 367	78 1218	701 4374	172	702	2 560	162	857	61	3 1071	321	2244	1 149	99 777	7 192	57	2
th Dakots	n. Oct.	65	18	239 2461	20 390	16 87	20 183	33 625	219 1497	26	20) l 107	. 5	73	28	7 62 4 525	21 206	93 1385	5 59		3 9 5 94	1	1
Певзоо	Oct. 10 Mos.	268	67	1230	84 1172	49 629	57	192 2457	1190 8703	46	111	4 1339	33	199	4	1 203	51	423	3 23	33 14	2 409	53	1 6
cas	Oct.	886	284	3572	304	134	752 194 2243	580 8040	3815	119	286	6 495 5 4095	203 1184	692	8 9	1 633	146	1342	2 74	47 51	5 80	138 548	-3
h	Oct.	64	18	209	24	1577	26	40	21981 162	8	3 15	5 57	1 15	72	2	8 40	13	59	9 6	66 4	8	. 7	1
rmont	Oct.	58	10	130	14	147	307 11	693 36	1566 121	3	16	6 19	10	41		9 30	12	73	3 8	59 3	4 6	8 8	
ginia	10 Mes. Oct.	623		1288	223	102 23 562	170 92	485 211	842 1448	51	1 134	4 199	88	312	2 5	3 261	1 88	478	5 29	70 36 94 19	8 92	2 65 47	
ashington.	110 Mos.		619	13340	1547	562 20	1158 90	3088 206	9544 968	986	1733	3 1855 4 116	446	2134	4 170	1 255	2 1008	8442	2 388	85 218 18 22	4 13	2 433	1 0
est Virginia	10 Mos		583	8825	1372		1197 35	2622	6637 491	871	1 1418	9 1164	\$ 390	0 1780 3 117	0 158		0 944	3710	0 270	09 265 92 6	7 186	6 369	4
	10 Mos	. 1216	255	4569	773	171	426	1251 221	2693	395		9 781	1 118	9 739	9 62	28 100	1 422	2 2381	1 108	67 80	3 148	8 11	
/laconsin	Oct. 10 Mos		888	14198	2154	378	116 1691	231 3988	1037 7667	1545	5 1968	5 2998	B 443	3 2331	1 437	70 421	8 1234	6606	6 42	28 247	4 428	8 40	1
yoming	Oct. 10 Mos	61 528				31	111	16 364	141 892				2 50	3 40 0 265		5 2	5 127			32 2 33 30	16 64		_
otal	Oct., 194	8 2093	6054	6025	9 6698	1619	5693	13343	5977	5 2114	4 6853	3 9621	357	8 1558	51 211	10 154	08 4645	242	29 18	367 112	206 1295		
otal10	Mos., 1946					22995	66704	173555	-	_	-	_								093 1200 7342 999	_		25
	. Oct., 1947	7 2450	9 2913	5259		1476	6640	19495	5023		1 460	1 6643	3 219	8 1183	0 817	75 151							2,5

^{*-}Data from R. L. Polk & Co.

SERVICE **HIGHLIGHTS**

On the 1949 CARS

MOTOR AGE, January, 1949

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Lincoln

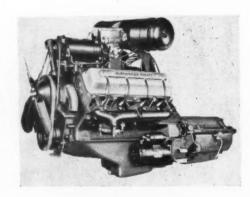


S ERVICING the new Lincoln is much easier than on the previous models due to simplifications in construction. Lincoln now has independent front wheel suspension direct acting shock absorbers mounted inside the coil springs. Rear suspension consists of 2 springs and a hotchkiss drive. Axle removal has been simplified by the use of a new rear axle assembly. It is powered with a newly designed V-8 engine equipped with hydraulic lifters and develops 152 H.P. The distributor location has been changed and also being a different type. For the first time a dual concentric downdraft carburetor is being used. Cooling has been improved by passing the water through the full length of the cylinder blocks from front to rear, returning through the cylinder heads back into the radiator.

Oldsmobile



THE new V8 "Rocket" engine has a compression ratio of 7.25 to 1 and is so designed that it can be increased progressively up to 12.5 to 1 without modifications on any part but the cylinder head. With a displacement of 303 cu. in. the en-

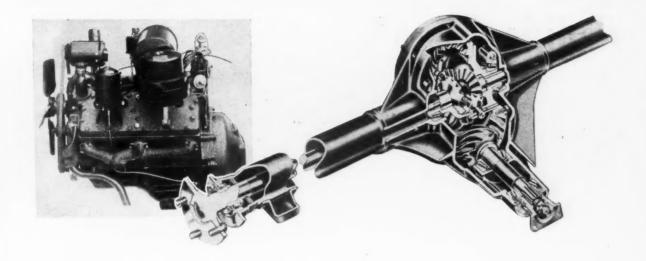


gine develops 135 hp. at 3600 rpm. The engine features valve in head design, using hydraulic lifters. Another outstanding feature is the newly designed Rochester carburetor which is easy to work on and is said to improve fuel distribution.

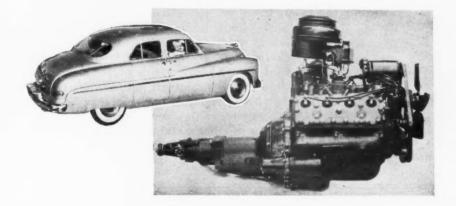
Nash



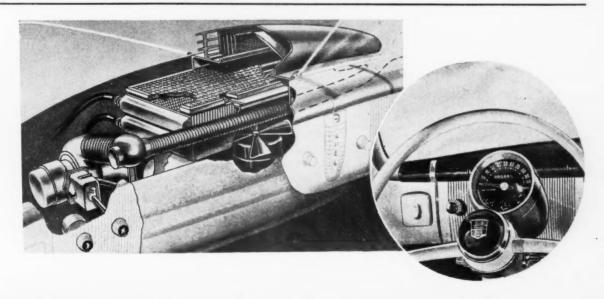
NEW body design, coil spring rear suspension on all models, redesigned crankshaft in both engines, and an improved carburetor are major improvements on the Nash models. Nash is featuring enclosed fenders over the front wheels. To do this the front tread was narrowed slightly. Wheels are easily removed by using the bumper jack which raises both the fenders and body and will provide ample room to remove the wheels. Aligning these front ends with the present fixtures will be difficult, but new fixtures are being made by most wheel alignment manufacturers and soon should be available. On the 600 series the piston pins are clamped in the rod intsead of being the full floating type as previously used by Nash.

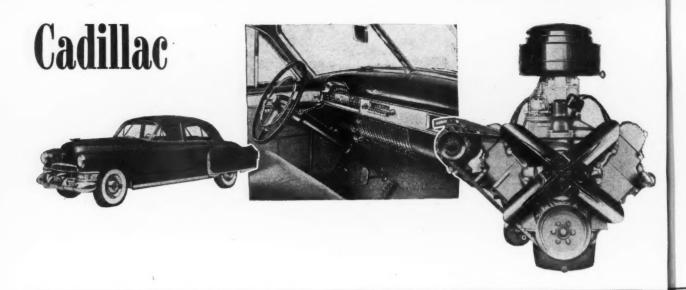


Mercury



A COMPLETE new car including a body, chassis, and redesigned engine. The chassis uses longitudinal springs in the rear and coil springs in the front. Engine improvements consists of one piece valve guides making it easier to remove the valves, individual connecting rod bearings, making it easier to work on the engine and a new type distributor and carburetor develops 110 hp.





Ford



TEW body chassis and a redesigned engine are the major improvements on the 1949 models. To speed up repairs on the engine, valves can now be removed without removing valve guides. The cylinder block and flywheel housing are now separated. By separating these two, clutch and transmission work is speeded up. Cylinder heads are held on with bolts in place of studs which makes heads easier to remove. The camshaft is now drilled from the front end to the center of the front bushing, giving proper lubrication to the thrust surfaces, camshaft gear and distributor drive gear. Intake manifold has been changed so as to place the carburetor in a vertical position and the intake passages in a horizontal plane when the engine is installed in vehicle. The crankshaft is drilled to provide dual oil holes, one for each rod bearing.

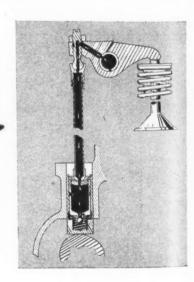
Buick



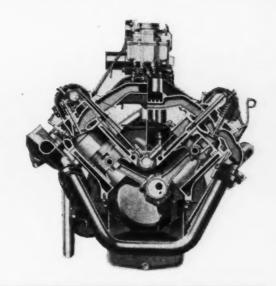
A MONG the important mechanical changes incorporated in the new Buick are hydraulic valve lifters, slip-in type rod bearings, and

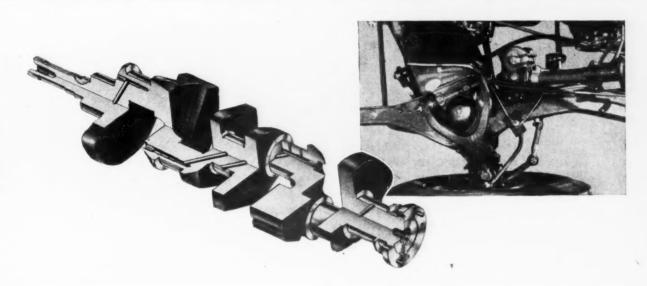
the Dynaflow transmission, as standard equipment on the series 70 and optional on the 50 series. Servicing the hydraulic lifters should present no problem to most mechanics as they operate on the same principle as the ones

used on Cadillac for the past few years. The engine ventilation has been improved by the addition of vent ports in the front fenders.



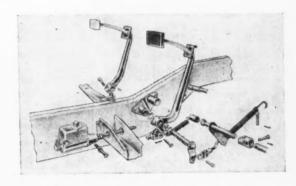
THE V8 Cadillac engine with overhead valves is completely new. This engine is one of the first high compression engines to be installed in a pleasure car. While the displacement is less than on previous engines, it develops more horsepower and gives better fuel economy. This engine has a ratio compression of 7:50 to 1 and a displacement of 331 cu. in. and develops 160 hp. The body remains essentially the same outside of the grille and instrument panel. The engine is fitted with aluminum alloy slipper type pistons which permit the use of shorter connecting rods. The newly designed manifold is one piece centered between the cylinder heads with shorter and larger passages.





Kaiser-Frazer





INCREASED horsepower and changes in body styling and improved clutch operation are the basic changes on the new models.

The new double throat manifold and carburetor has improved engine performance. Redesigned clutch linkage eliminates 52 parts.

CHASSIS AND ENGINE SPECIFICATIONS



The trend in chassis design is toward shorter wheel-bases and more intelligent use of the available width. Increased visibility and lower centers of gravity have been integral with every new design. Elimination of removable fenders will affect body repair technique. Low pressure tires are now common. The major trend in engine design is toward high compression ratios with the corresponding increase in horsepower. V-8 and in-line engines continue to share the popularity. Oldsmobile has changed to V-8.

		TRE		DIMEN	VERAL		Sedan						ENGI	NE				
MAKE AND MODEL	Wheelbase (In.)	Front	Rear	Length-Incl. Bumpers and Bumper Guards	Width	Height—Road to Roof—No Load	Shipping Weight (Lh.) Cheapest 5 Pass., 4 Door 9 or Equivalent	Tire Size (In.)	Number of Cylinders, Bore and Stroke (In.)	Taxable Horsepower	Valve Arrangement	Total Piston Displacement (Cu. In.)	Max. Brake Hp. at Specified RPM	Max. Torque at Specified RPM	Standard Compression Ratio (to -1)	Weight per Cu. In.	Weight per Hp.	Hp. per Cu. In.
BulckSpecial 40 BulckSuper 50 BulckRoadmaster 70	121 121 126	583/8 591/8 591/8	61 18 62 18 62 16	207½ 209¾ 214⅓	77 16 78½ 78½ 78½	66 84 65 84 65 84	3695 3835 4205	6.50/16 7.60/15 8.20/15	8-3 \frac{3}{12} x 4 \frac{1}{8} 8-3 \frac{3}{12} x 4 \frac{1}{8} 8-3 \frac{1}{16} x 4 \frac{5}{16}	30.6 30.6 37.8	-	248.1 248.1 320.2	110-3600 115-3600 150-3600	206-2000 212-2000 280-2000	6.30 6.60 6.90	16.91 17.47 14.69	38.14 37.69 31.37	.44
Cadillac 61 Ladillac 62 Ladillac 60 Cadillac 75	126 126 133 136¼	59 59 59 58½	63 63 63 62½	215 3 2 215 3 2 226 1 6 2 2 5	78 1 8 78 1 8 82 1 6	63 16 63 16 63 16 68 1/2	3950 3980 4150 4665	8.20/15 8.20/15 8.20/15 7.50/16	8-312x358 8-312x358 8-312x358 8-312x358	46.5 46.5 46.5 46.5	-	331.0 331.0 331.0 331.0	160-3800 160-3800 180-3800 160-3800	312-1800 312-1800 312-1800 312-1800	7.50 7.50 7.50 7.50	13.44 13.53 14.04 15.60	27.81 28.00 29.06 32.28	.48 .48 .48
ChevroletFJ-FK	116	575%	60	1973/4	723/4	693/8	3115	8.00/16	6-3½x3¾	29.4	1	216.5	90-3300	174-1600	6.50	16.70	40.17	.41
Chrysler	121½ 127½ 145½	57 5712 5713	60 1 1 61 1 8	210¾ 216¾ 234¾	773/4 773/4 773/4		3523 3972 4332	7.60/15 8.20/15 8.90/15	8-314x478 8-314x478	28.3 33.8 33.8	L	250.6 323.5 323.5	114-3600 135-3400 135-3400	204-1200 270-1600 270-1600	6.60 6.70 6.70	16.05 13.82 14.94	35.29 33.12 35.79	.41
rosleyCC	80	40	40	145	49	57	1115	4.50/12	4-2½x2¼	10.0	1	44.0	26.5-5400		7.50	36.70	60.94	.6
e SotoS-11	1211/2	57	60 3	2071/4	75%		3435	7.60/15	6-314x41/4	27.3	L	236.6	109-3600	192-1200	6.60	16.63	36.10	.4
odgeD-24	1191/2	57	6033	2041/2	75%		3256	7.10/15	6-31/4×45/8	25.3	L	230.2	102-3600	184-1200	6.70	16.32	38.82	.4
ordSix 98HA ordEight 98BA	114 114	56 56	56 56	196.8 196.8	71.7 71.7	64.7 64.7	3012 3061	6.00/16 6.00/16	6-3.3x4.4 8-3 ** x3*4	26.1 32.5	L	225.8 239.4	95-3300 100-3600	180-1200 181-2000	6.80	15.55 14.87	36.97 35.61	.4
azerF495-F496	1231/2	58	60	20716			3375	7.10/15	6-35x48/8	26.3	L	226.2	112-3600	180-1400	7.30	17.13	34.60	
udson	1237/8 123	58½ 58½	55½ 55½	207½ 207½	77 ts 77 ts	60½ 60¼	3500 3600	7.10/15 7.10/15	6-3 % x43/8 8-3x41/2	30.4 28.8	L	262.2 254.0	121-4000 128-4200		6.50 6.50	15.25 16.14	33.06 32.03	1.5
alserK491-K492	1231/2	58	60	20716			3302	7.10/15	6-33x43/8	26.3	L	226.2	100-3600	180-1400	7.30	18.81	38.02	1.
incoln9EL incoln9EH	121 125	58½ 58½	60 60	220½ 220	79 79	[65.3 64.2	4060 4315	8.20/15 8.20/15	8-3½x43/8 8-3½x43/8	39.2 39.2	L	336.7 336.7	152-3600 152-3600	265-2000 265-2000	7.00	13.54 14.30	30.00 31.67	1
lercury9CM	118	581/2	60	206.8	76.9	64.8	3430	7.10/15	8-334	32.5	L	255.4	110-3600	200-2000	8.80	15.39	35.82	.4
ash	112 121	5418 5418	5911 5911	201 210	771/2	63 63½	2905 3320	6.40/15 7.10/15	6-3½x3¾ 6-3¾x4¾	23.4 27.3	L	172.6 234.8	82-3800 112-3400	138-1600 208-1600	7.00 7.02	19.73 16.27	41.52 34.11	1:
Oldsmobile Futuramic 76 Oldsmobile Futuramic 88 Oldsmobile Futuramic 98	119½ 119½ 125	57 57 58	59 59 61½	202 202 213	75 % 75 % 78%	62 78 63 12 63 13	3324 3615 3892	7.10/15 7.60/15 7.60/15	6-311x488 8-384x316 8-384x316	29.9 45.0 45.0	L	257.1 303.7 303.7	105-3400 135-3600 135-3600	202-1400 263-1800 263-1800	6.50 7.25 7.25	14.87 13.55 14.46	38.42 30.48 32.53	1.4
Packard	120 120 127	59 11 59 11 60 11	6011 6011 6011	2045/8 2045/8 2125/8	77±5 77±5 77±5	64161 64161 64151	3815 3855 4175	6.50/16 7.00/15 7.00/15°	8-3½x3¾ 8-3½x4¼ 8-3½x4¾	39.2 39.2 39.2	111	288.0 327.0 356.0	130-3600 145-3600 160-3800	226-2000 266-2000 282-2000	7.00 7.00 7.00	14.98 13.31 13.13	33.19 30.03 29.22	1.4
lymouthP-15	117	57	601/8	196%	735/8		3082	6.70/15	6-31/4×43/8	25.3	L	217.8	95-3600	172-1200	6.60	16.45	37.70	1.
ontiac	119 122 119 122	58 58 58 58	61½ 61½ 61½ 61½	204½ 210¼ 204½ 210¾	75% 76% 75% 76%	66 65 ¹ / ₄ 66 65 ¹ / ₄	3320 3450 3395 3525	6.00/16 6.50/16 6.00/16 6.50/16	6-3-4x4 6-3-4x4 8-3-4x3-4 8-3-4x3-4	30.4 30.4 33.8 33.8	1111	239.2 239.2 248.9 248.9	93.5-3400 93.5-3400 107.5-3700 107.5-3700	186-1400 192-2100	6.50 6.50 6.50 6.50	15.97 16.51 15.65 16.17	40.85 42.25 36.23 37.44	
tudebaker	112 119°	563/4 55	54 54	19031 20413	6913	60¾ 61½	2720 3195	5.50/15 6.50/15	6-3x4 6-3 16 x43%	21.6 26.3	L	169.6 226.2	80-4000 94-3600	134-2000 176-1600	6.50 6.50	18.98 16.33	40.25	1:
/illys4-637 /illysJeepster VJ-2 /illys6-63	104 104 104	551/4 551/2 551/2	57 57 57	174 11 178½ 176½	68 69½ 68¾	63 76 ° 72 13	2898 2394 2968	6.00/15 5.90/15 6.00/15	4-31/8x43/8 4-31/8x43/8 6-3x31/2	15.6 15.6 21.6	1111	134.2 134.2 148.5	63-4000 63-4000 72-4000	105-2000 106-2000 117-1600		25.32 21.58 23.35	53.94 45.93 48.17	1

ABBREVIATIONS

MO

In-head. -L-head. Wheelbase 119 in. and 123 in. bumper

to bumper 204 vs and 208 vs which includes Land Cruiser.

"—Model 2233 tires are 7.00/16.

"—With load.

"—Less Fan and Muffler.

With load and top up.
 Calculated on the basis of shipping weight of cheapest 5 pass. 4 door sedan plus 500 lb for gasoline, oil, water and passengers.

PISTONS, RINGS AND CONNECTING RODS

Slipper type pistons are used on the new high compression engines. Chrome compression rings are proving very satisfactory, and U-type rings are being developed. Buick

adopted insert type connecting rod bearings. Increasing compression has made necessary a stiffer crankshaft, achieved by increasing the number of main bearings to hold it more firmly.

				PISTON	1				Р	ISTON	RIN	GS		WR	IST PIN		CONNE	
	Number of				out	Ring G	roove		Oil	-	C	ompressi	ion					
MAKE AND MODEL	Cylinders, Bore and Stroke (In.)	Make	Material	Features	Weight (az.) Without Rings, Pin or Bushing	lio	Compression	Number Used	Width (In.)	Average Gap (In.)	Number Used	Width (In.)	Average Gap (In.)	Length (In.)	Diameter (in.)	Locked In-	Length (In.) Center-to-Center	Weight (Oz.)
Buick Special 40 Buick Super 50 Buick Readmaster 70	8-3-2x41/8 8-3-2x41/8 8-3-2x41/8	Var Var Var	AI AI AI	Af,C,Tt,Trs Af,C,Tt,Trs Af,C,Tt,Trs	13.77 13.77 17.94	.166 .166 .182	.166 .166 .182	2 2 2	.1875† .1875† .1875†	.015‡ .015‡ .015	2 2 2	.0937 .0937 .0937	.015 .015 .015	2.687 2.687 3.062	.8125 .8125 .8750	RRR	7.625 7.625 8.250	28.46 28.46 31.58
Cadillac 61 Cadillac 62 Cadillac 60S Cadillac 75	8-312x35% 8-312x35% 8-312x35% 8-312x35%	AB AB AB	AI AI AI	Ts Ts Ts Ts	19.29 19.29 19.29 19.29	.187 .187 .187 .187	.187 .187 .187	1 1 1	.1875 .1875 .1875 .1875	.015 .015 .015	2 2 2 2	.0781 .0781 .0781 .0781	.015 .015 .015	2.750 2.750 2.750 2.750 2.750	1.000 1.000 1.000 1.000		6.625 6.625 6.625 6.625	24.53 24.53 24.53 24.53
ChevroletFJ-FK	6-3½x3¾	Own	CI	Fh,Ov,Sp	24.96	.176	.156	1	.1862	.010	2	.1237	.010	3.150	.8647	R	6.812	30.70
Chrysler C-38 Chrysler C-39 Chrysler C-40	6-3-4x4½ 8-3¼x4¾ 8-3¼x4¾		AI AI AI	C,Us C,Us C,Us	18.50 16.50 16.50	.178 .172 .172	.176 .169 .169	2 2 2	.1562 .1562 .1562	.011 .011 .011	2 2 2	.0937 .0937 .0937	.011 .011 .011	2.875 2.750 2.750	.8593 .8593 .8593	F	7.875 9.000 9.000	32.40
CrosleyCC	4-2½x2¼	Own	Al	C,Af	6.50	.131	.131	2	.1550	.011	2	.0622	.012	2.260	.6251	F	4.125	9.62
De Soto	6-316x41/4		Al	C,Us	18.50	.178	.176	2	.1562	.011	2	.0937	.011	2.875	.8593	F	8.000	34.10
Dodge	6-3½x45% 6-3.30x4.40		AI	C,Us Ov.Tp.Dw.Fh	16.50	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	7.812	28.79
FerdEight 98BA	8-3-8x384		AI	Tp,Ov,Dw,Sh	13.12	(a)	.173	2	.1547	.013	2	.0932	.013	2.847	.7503	F	7.000	18.70
Frazer	6-3 ₁₆ x43/8	NB	Al	Ss,Ov,Tp	15.58	.179	.177	2	.1547	.012	2	.0930	.012	2.812	.8593	F	7.000	29.60
Hudson 6, 481-482 Hudson 8, 483-484	6-3 ₁ %x43% 8-3x4½	Own Own	AI	C	18.00 10.75	.195	.195	2 2	(b)	.009	2 2	.0780	.009	2.937 2.437	.9680 .7500	F	8.125 8.187	34.24
KaiserK491-K492	6-3 16 x 43/8	NB	Al	Ss,Ov,Tp	15.58	.179	.177	2	.1547	.012	2	.0930	.015	2.812	.8593	F	7.000	29.60
Lincoln9EL Lincoln9EH	8-3½x4¾ 8-3½x4¾	N	(c)	Tp,Ov,Ss Tp,Ov,Ss	19.33 19.33	.188	.178	2 2	.1860	.012	2 2	.0933	.012	3.118	.8503 .8503	F	8.062 8.062	27.27
Mercury9CM	8-316x4	N	(c)	Tp,Ov,Ss	13.05	.159	(d)	2	.1860	.014	2	.0933	.016	2.847	.7503	F	7.000	18.49
Nash	6-31/6x38/4 6-38/6x48/6	Bo Bo	AI AI	Tp,C,St,Sk Tp,C,St,Ss	12.50	.174	(e) (f)	2 2	.1547	.015	2 2	.0933	.016	2.750	.8594 .8746	R	6.859 8.750	25.00 36.25
Oldsmobile Futuramic 76 Oldsmobile Futuramic 88 Oldsmobile Futuramic 98	6-311x43% 8-334x316 8-334x316	Own Own Own	AI AI	T,C,Oa Tp,C,St,At Tp,C,St,At	18.24 19.88 19.88	.175 .193 .193	.183 .200 .200	2 1 1	.1875 .1875 .1875	.011 .012 .012	2 2 2	.0937 .0781	.012 .012 .012	3.156 3.011 3.011	.8550 .9850 .9850	PFF	7.812 6.625 6.625	30.72 29.54 29.54
Packard	8-3½x3¾ 8-3½x4¼ 8-3½x4¾		AI AI	At At At	19.50 19.50 19.50			1 1 1	.1865 .1865 .1865	.011 .011 .011	2 2 2	(g) (g) (g)	.012 .012 .012	3.015 3.015 3.015	.8750 .8750 .8750	FFF	7.937 7.687 9.250	35.70 35.40 38.90
PlymouthP-15	6-31/4×43/8		AI	C,Us	16.00	.172	.169	2	.1562	.011	2	.0937	.011	2.750	.8593	F	7.937	
Pontiae 6-25 Pontiae 6-26 Pontiae 8-27 Pontiae 8-28	6-3-4x4 6-3-6x4 8-3-4x3-34 8-3-4x3-34	Own Own Own Own	CN CN CN	Ep Ep Ep	27.10 27.10 24.70 24.70	.194 .194 .189	.192 .192 .169	1 1 1 1 1	.1875 .1875 .1875 .1875	.010 .010 .012	2 2 2 2	.0937 .0937 .0937	.010 .010 .012 .012	3.062 3.062 2.875 2.875	.9375 .9375 .9375	PPP	7.562 7.562 7.562 7.562	37.00 37.00 31.70 31.70
Studebaker	6-3x4 6-3\frac{5}{16}x4\frac{5}{6}	AC AC	Lyn Lyn	Ţ	8.48 14.40	.168	(h)	1	.1562	.012	2 2	(i) .0937	.012	2.625 2.875	.7500 .8750	R	6.375 8.125	20.40
Willys	4-31/6×43/6 4-31/6×43/6 6-3×31/2	Var Var	AI AI	Tp,Ov Tp T,Ov,Tp	12.50 12.50	.170 .170	.160	1 1 1	.1862 .1862 .1875	.010 .010 .013	2 2 2	.0935 .0935 .0937	.010 .010 .013	2.781 2.781 2.531	.8125 .8125 .7497	RRR	9.187 9.187 6.345	34.00 34.00

31 95

31

08 44 44

472 415

469 469 485

1949

-Upper .1875; Lower .1860.
-Upper .015; Lower .0015 segmental.
-Upper .015; Lower .0015 segmental.
(a)-Upper .174; Lower .175.
(b)-Upper .1875; Lower .156.
(c)-Aluminum alloy, imbedded steel strut.
(d)-Upper .168; Lower .178.
(e)-Upper .170; Lower .154.
(f)-Upper .180; Lower .157.
(a)-Upper .9932; Lower .1235.

(h)—Top .163; Middle .148.
(l)—Top .0937; Middle .125.
AB—Aluminum Co. of America or Bohn Aluminum.
AC—Aluminum oxide finish.
Al—Aluminum alloy.
At—Auto-thermic.
Bo—Bohn Alum. and Brass Co.
C—Cam ground.
CI—Cast alloy iron, surface treated.

ABBREVIATIONS

ONS
CN—Chrome-nickel alloy.
Dw—Double wing.
Ep—Electro plated.
F—Floating.
Fh—Flat head.
Lyn—Lynite.
N—Nelson Bohnalite.
Oa—Oxalic sulphuric acid.
Ov—Oval.
R—Rod.
Sh—Spherical head.

Sk—Solid skirt.

Sp—Slipper skirt.

Ss—Split skirt.

St—Strut.

T—T-slot.

Tp—Tin plated.

Trs—Transverse slot.

Tt—Turbulator top.

Ts—T-slot-stanate finish.

Us—U-slot.

Var—Various.

VALVES AND VALVE TIMING



There has been little change in the valves used by major car manufacturers, but two additional manufacturers—Oldsmobile and Buick—have adopted hydraulic lifters to their engines. And Crosley is now using valve

rotators. The Ford line has redesigned the valve system—the 6 cylinder model has adjustable tappets, and the V-8's have replaced the mushroom stem with straight stem. Ford-made cars now use split spring keepers.

		Mat	erial		ead neter		Seat			tem meter		ive ift		Valve Clearanc	Tappet e (Inche	s)			Timing rees)	
MAKE						Exhaust	An	gle					In	take	Ext	naust	Int	ake	Exh	aust
AND MODEL	Make	Intake	Exhaust	Intake	Exhaust	Inserts Used-Ex	Intake (Deg.)	Exhaust (Deg.)	Intake	Exhaust	Intake	Exhaust	Operating	Timing	Operating	Timing	Open	Closed	Open	Closed
BuickSpecial 40 BuickSuper 50 BuickRoadmaster 70	T-R T-R T-R	3140 3140 3140	(a) (a) XB	111	1# 1# 1# 1#	No No No	45 45 45	45 45 45	.372 .372 .372	.371 .371 .371	.348 .348 .347	.342 .342 .348	.015H .015H Hyd	.015 .015 Hyd	.015H .015H Hyd	.015 .015 Hyd	13BT 13BT 14BT	68AB 68AB 71AB	55BB 55BB 56BB	22AT 22AT 25AT
Cadillac	RM RM RM RM	3140 3140 3140 3140		13/4	1& 1& 1& 1& 1&	No No No	44 44 44 44	44 44 44 44	.343 .343 .343	.343 .343 .343	.330 .330 .330	.330 .330 .330 .330	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	Hyd Hyd Hyd Hyd	19BT 19BT 19BT 19BT	83AB 83AB 83AB 83AB	53BB 53BB 53BB 53BB	49AT 49AT 49AT 49AT
ChevroletFJ-FK	Own	ES	ES	162	111	No	30	30	.341	.343	.294	.311	.006H	.006H	.013H	.013H	1AT	39AB	42BB	9A1
Chrysler C-38 Chrysler C-39 Chrysler C-40	Var Var Var	AS AS AS	SS SS SS	1111	1#	Yes Yes Yes	45 45 45	45 45 45	.341 .341 .341	.339 .340 .340	.375 .375 .375	.375 .375 .375	.008H .008H	.014 .011 .011	.010H .010H .010H	.014 .014 .014	12BT 12BT 12BT	44AB 44AB 44AB	50BB 50BB 50BB	6A1 6A1 6A1
CrosleyCC	Own	3140	21-12	111	14	No	45	.45	.313	.312	.225	.225	.005C	.009	.008C	.009	5BT	50AB	50BB	5AT
De SotoS-11	Var	AS	SS	133	118	Yes	45	45	.341	.339	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6A1
OodgeD-24	Var	AS	SS	117	111	Yes	45	45	.341	.341	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	6A
ordSix 98HA	Var Var	\$\$ \$\$	CA	1.65	1.51	Yes Yes	45 45	45 45	.341	.341	.350	.350	.010C	.015	.014C	.015	11BT TC	41AB 44AB	48BB	10A'
FrazerF495-F496		NS	SS	182	122	No	30	45	.341	.339	.348	.331	.014C	.014	.014C	.015	10BT	60AB	55BB	10A
ludson	WR WR	8645 8645	8645 XB	1.83	1.55	No No	45 45	45 45	.341 .341	.340 .339	.346	.346 .343	.010H .006H		.012H .008H		103/sBT	80AB	50BB	1034
Calser		NS	SS	122	121	No	30	45	.341	.339	.348	.331	.014C	.014	.014C	.014	10BT	60AB	55BB	10A
Incoln9EL	WR†	SS	CA	1.80	1.51	Yes Yes	45 45	45 45	.341	.341	.357	.340	Hyd Hyd	Hyd Hyd	Hyd Hyd	Hyd Hyd	14BT 14BT	60AB	62BB 62BB	16A'
Mercury9CM	WR†	SS	CA	1.51	1.51	Yes	45	45	.341	.341	.338	.338	.011	.015	.015	.015	10BT	50AB	50BB	10A
Nash600-4940 NashAmbassador 4960	AR AR		2112 2112	114	14	No No	4	A	.341 .372	.341	.312	.312	.015H .015	.019	.015H .018	.019	6BT 4½BT	50AB 61½AB	46BB 49⅓BB	10A1 16½
OldsmobileFuturamic 76 OldsmobileFuturamic 88 OldsmobileFuturamic 98	Var Var Var	3140 3140 3140	SS SS SS	1% 1% 1%	1 21 1.46 1.46	No No No	30 45 45	45 45 45	.342 .342 .342	.341 .393 .393	.310 .222 .222	.308 .222 .222	.008H Hyd Hyd	.012 Hyd l lyd	.011H Hyd Hyd	.015 Hyd Hyd	5BT 14BT 14BT	45AB 50AB 50AB	45BB 50BB 50BB	5A1 14A1 14A1
Packard	•••••	CNS CNS CNS	Aus Aus Aus	1.67 1.67 1.67	1.43 1.43 1.43		30 30 30	45 45 45	.341 .341 .341	.339 .339 .339	.342 .342 .342	.342 .342 .342	.007 .007 Hyd	.012 .012 Hvd	.010 .010 Hyd	.015 .015 Hyd	10BT 10BT 4BT	50AB 50AB 51AB	50BB 50BB 49BB	5A1 5A1 10A1
PlymouthP-15	Var	AS	SS	1.53	1.53	Yes	45	45	.341	.341	.375	.375	.008H	.014	.010H	.014	12BT	44AB	50BB	BAT
Pontiac 6-25 Pontiac 6-26 Pontiac 8-27 Pontiac 8-28	Opt Opt Opt Opt	Opt Opt Opt Opt	Opt Opt Opt Opt	111	111111111111111111111111111111111111111	No No No No	30 30 30 30	45 45 45 45	.312 .312 .312 .312	.312 .312 .312 .312	.298 .298 .296 .296	.296 .296 .296	.012H .012H .012H .012H	.012 .012 .012 .012	.012H .012H .012H .012H	.012 .012 .012 .012	5BT 5BT 5BT 5BT	39AB 39AB 39AB 39AB	4588 4588 4588 4588	5A1 5A1 5A1
Studebaker	WR WR	CNS	2112 SS	111	147	No No	45 45	45 45	.312	.312	.312	.312	.016C	.020	.016C	.020	15BT 15BT	49AB 49AB	54BB 54BB	10A 10A
Willys	AR	CNS	CNS	111	111	No	45 45 45	45 45 45	.373 .373 .340	.372 .372 .340	.351 .351 .284	.351 .351 .300	.014 .014 .014	.020	.014 .014 .014		9BT 5BT	50AB 44AB	4788 788	12A1

^{†—}Also Rich and own.

—45° in block; 44° valve face.
(a)—X.B. or 2112.
AB—After bottom center.
AR—Alum. Ind. or Rich Mfg.
AS—Alloy steel.

MOT

AT—After top center.
Aus—Austenitic steel.
BB—Before bottom center.
BT—Before top center.
CA—Ni-Chro Alloy.
CNS—Chrome-Nickel steel.

ABBREVIATIONS

ES—Extruded steel,
H—Hot.
Hyd-Hydraulic valve lifters.
MS—High manganese steel,
NS—Nickel steel.
Opt—Optional.

RM—Rich Mfg. Co.

SS—Silicrome steel, TC—Top center. T-ER—Thompson or Eaton or Rich. T-R—Thompson or Eaton Mfg. Co. Var—Various. WR—Eaton Mfg. Co.

ELECTRICAL EQUIPMENT

Rapid growth in television has necessitated redesign of some electrical parts-spark plugs with built in suppressors and relocation of distributors and coils are common. Many cars have

increased generator output to take care of the heavy drain from the additional electrical accessories. Batteries have been redesigned so that they now need be refilled much less often.

		10	GNITIC	N		1	BPARK	PLUG	8	BAT	TERY			TARTE	R		GE	NERAT	TOR
				Tim	Ing									Flyw	rheel			Chargi	ng Rat
MAKE AND MODEL	Make	Point Gap (In.)	Cam Angle (Deg.)	Spar Occurs Deg.—TC	Marks On	Make	Model	Thread Size	Gap (in.)	Make	Capacity—Amp. Hrs. at 20-hr. Rate	Make	Type of Drive	Number of Teeth	Ratio to Starter	To Start Motor	Make	Amperee	Car Speed-mph.
BulckSpecial 40 BulckSuper 50 BulckRoadmaster 70	DR DR DR	.015 .015 .015	:	4BT 4BT 6BT	Fly Fly Fly	AC AC AC	48 48 48	14 14 14	.025 .025 .025	DR DR DR	100 100 120	DR DR DR	Sgo Sgo Sgo	148 148 158	18.22 16.22 17.33	Dap Dap Dap	DR DR DR	35 40 40	25 25 25
Cadillac 61 Cadillac 62 Cadillac 60S Cadillac 75	DR DR DR DR	.015 .015 .015	31 31 31 31	5BT 5BT 5BT 5BT	VD VD VD	AC AC AC	48 48 48 48	14 14 14 14	.035 .035 .035	DR DR DR DR	115 115 115 115	DR DR DR	Sgo Sgo Sgo	145 145 145 145	18.10 18.10 16.10 18.10	Pbd Pbd Pbd Pbd	DR DR DR DR	40 40 40 40	27 27 27 27 27
ChevroletFJ-FK	DR	.021	34	5BT	Fly	AC	M8	10	.040	DR	100	DR		139	15.44	Dap	DR	35	28
Chrysler C-38 Chrysler C-39 Chrysler C-40	AL AL AL	.020 .018 .018	38 29 29	2AT 2AT 2AT	VD VD VD	AL AL AL		14 14 14	.025 .025 .025	W-A W-A W-A	120 135 135	AL AL AL	Sgo Sgo Sgo	148 148 146	16.22 16.22 16.22	Pbd Pbd Pbd	AL AL AL	35 35 40	25 26 24
CrosleyCC	AL	.020	48	12BT	Fly	AL	A7	14	.025		70	AL		88	8.80	Pbd	AL	35	40
De SotoS-11	AL	.020	38	TC	VD	AL		14	.025		110	AL	Sge	148	18.22	Pbd	AL	35	28
DodgeD-24	AL	.020	38	2AT	VD	AL		14	.025	W-A	105	AL	t	146	18.22	Pbd	AL	35	25
FordSix 98HA FordEight 98BA	Own Own	.025	36 29	TC 2BT	VD	CH	H-10 H-10	14 14	.030		100	Own	Ben Ben	114 112	12.70 11.20	Pbd Pbd	Own	31	20
FrazerF495-F498	AL	.020	38	4BT	VD.	AL	A5	14	.032	WII	100	AL	Ben	130	14.44	Pbd	AL	35	24
Hudson	AL AL	.020	38 27	TC	Fly	CH	J-9 H-10	14 14	.038	Nat Nat	120 120	AL	Ben Ben	134 134	14.90 14.90	Pbd Pbd	AL	43° 43°	35 35
KalserK491-K492	AL	.020	38	4TC	VD	AL	A5	14	.032	WII	100	AL	Ben	130	14.44	Pbd	AL	35	24
Lincoln9EL Lincoln9EH	AL AL	.017	28 28	4BT 4BT	VD VD	CH	H-10 H-10	14 14	.030	Var Var	120 120	Own Own	Ben Ben	120 120	12.00 12.00	Pbd Pbd	Own	40 40	193
Mercury9CM	Own	.015	28	2BT		СН	H-10	14	.030	Var	100	Own	Ben	112	11.20	Pbd	Own	30	18.6
Nash	DR DR	.020	35 35	TC	VD VD	AL AL	A5 A5	14 14	.025	AL AL	90 105	DR DR	Ben Ben	122 104	13.50	Dcp Dcp	DR DR	33 33	
Oldsmobile Futuramic 76 Oldsmobile Futuramic 88 Oldsmobile Futuramic 98	DR DR DR	.020 .015 .015	35° 22° 22°	TC 2½BT 2½BT	Fly VD	AC AC AC	45 44 44	14 14 14	.040 .030 .030	DR DR DR	100 115 115	DR DR DR	Sgo Sgo	145 145 145	16.11 16.11 16.11	Pbd Pbd Pbd	DR DR DR	40 40 40	22 22 21
Packard	(a) (a) AL	.015 .015 .015	274 274 27	6BT 6BT 6BT		(b) (b)	(b) (b)	10 10 10	.027 .027 .027	W-A W-A	100 100 120	(a) (a) AL	Ben Ben	140 140 140	15.55 15.55 15.55		AL AL AL	35 35 35	
PhymouthP-15	AL	.020	38	TC	VD	AL		14	.025	W-A	95	AL	Ben	146	16.22	Pbd	AL	35	25
Pontiae 6-25 Pontiae 6-26 Pontiae 8-27 Pontiae 8-28	DR DR DR	.020 .020 .015	37 37 31 31	4BT 4BT 4BT 4BT	Fly Fly Fly	AC AC AC	45 45 45 45	14 14 14 14	.025 .025 .025 .025	DR DR DR	100 100 100 100	DR DR DR	Ben Ben Ben	140 140 140 140	15.55 15.55 15.55 15.55	Dap Dap Dap Dap	DR DR DR	33 33 33 33	25 25 25 25 25
Studebaker	AL	.020	38	2BT 2BT	VD VD	CH	J-7 J-7	14	.025	WI	100	AL	Ben Ben	124 133	13.77	Dcp Dcp	AL	35 35	20.2
Willys	AL AL AL	.022	41	5BT 5BT TC	Fly	AL AL AL	AN-7 AN-7 AT-F	14 14 14	.030	AL AL AL	100 100 100	AL AL AL		124	13.78	Pbd	AL AL AL	33	

ABBREVIATIONS

d

n

le

8.

TITIT

T TATAT AT AT AT AT AT 0%AT TAC

DAT OAT 1814AT

5AT 4AT 4AT

5AT 5AT 10AT BAT

12AT 12AT

Rich.

y, 1949

^{*}Do not recommend using dwell meter
for checking point opening.

Beadix type drive.

Botton amps. 8 volts at 3600 rpm.

Dowll angle.

Models 2211 and 2232 have a cam
angle of 31 degrees.

⁽a)—Auto Lite GD2-4801 F or Deleo 110699.
(b)—AC104—Champ. Y4R or Auto Lite P4.

AC—AC Spark Plug Div.
AL—The Electric Auto Lite Co.
AT—After top center.
Ben—Bendix Eclipse Machine Div.
BT—Before top center.

CH—Champion Spark Plug Co.
Dap—Depress accelerator pedal.
D p—Depress celtuch pedal.
DR—Delco-Remy Div.
Dsp—Turn on ignition and depress
starter pedal.
Fly—Flywheel.
Nst—National Battery Co.
Pbd—Push button dash.

Spo—Sliding gear with over-running clutch.
TC—Top center.
Var—Various.
VD—Vibration damper.
W-A—Willard Storage Battery Co. cr
The Electric Auto Lite Co.
WII—Willard Storage Battery Co.

CLUTCH, TRANSMISSION AND REAR AXLE



Continued interest in producing cars which will be completely automatic in shifting has led to increased use of various types of automatic transmissions and in one instance to

a true torque converter. There will undoubtedly be one or two more cars with them in the near future. Fluid couplings are becoming more popular with most automobile manufacturers.

			CLUTC	н				T	RANSN	1188101	V			UNI	VERS	AL		REAR	AXLE	
			lee	Faci	ngs		Gear	Shift	-1)	Trans	mission	Gears	Ratio							(In.)
MAKE AND MODEL	Make	Drive Type	Through Fluid Flywheel	Inside Diam. (in.)	Outside Diam. (In.)	Make	Manual	Automatic	Rear Axle Ratio (to -	Overdrive	Low	Second	Reverse	Make	Number Used	Drive Medium	Make	Туре	Type of Gearing	Min, Road Clearance
Buick Special 40 Buick Super 50 Buick Roadmaster 70	Own* Own* No	Dff Dff No	No No No	6 6 No	10 10 No	Own Own Own	Yes Yes No	No (a) Yes	4.45 4.45 4.10	No No No	2.67 2.67 1.82	1.66 1.66	3.02 3.02 1.82	S-S S-S Sag	1 1 1	###	Own Own Own	SF SF SF	Нур Нур Нур	711 71/4 91/4
Cadillac 61 Cadillac 62 Cadillac 60 Cadillac 75	Long Long Long Long	Dff Dff Dff Dff	No No No No	7 7 7 7	10½ 10½ 10½ 10½	Own Own Own Own	Yes Yes Yes Yes	(b) (b) (b)	3.77 3.77 3.77 4.27	No No No No	2.39 2.39 2.39 2.39	1.53 1.53 1.53 1.53	2.39 2.39 2.39 2.39	Mec Mec Mec Mec	2 2 2 2	Spr Spr Spr Spr	Own Own Own Own	SF SF SF	Hyp Hyp Hyp Hyp	8 8 8
Chevrolet	(c)	Dff	No	61/8	91/8	Own	Yes	(d)	4.11	No	2.94	1.68	2.94	Own	1	Spr	Own	SF	Нур	7%
Chrysler C-38 Chrysler C-39 Chrysler C-40		Dff FD FD	No Yes Yes	7 6 6	10 10 10		Yes Yes Yes		3.90 3.91 3.58	No No No	2.57 2.57 3.57	1.83 1.83 2.04	3.48 3.48 3.99		2 2 3	Spr Spr Spr		SF SF SF	Нур Нур Нур	9 14
CrosleyCC	Roc	Dff	No	4	6	WG	Yes	No	5.17	No	3.29	1.72	3.29	Spi	1	TT	Spi	SF	SB	61/6
De SotoS-11		Dff	No	7	10		Yes	‡	3.90	No	2.57	1.83	3.48		2	Spr		SF	Нур	9
Dodge		Dff	Yes	6	91/4	Own	Yes	No	4.10 3.73	No .704	2.57	1.83	3.48		2	Spr	Own	SF	Нур	85%
FordSix 98HA FordEight 98BA	Long	Dff	No	6	91/2	Own	Yes	No	3.73	.70+	2.81	1.60	3.62		2	Spr	Own	SF	Нур	8.2
Frazer	BB	Dff	No	6	91/4	WG	Yes	No	4.09	.70	2.57	1.55	3.48	Uni	3	Spr	Spi	SF	Нур	711
Hudson	Own Own	Dff Dff	No No	63% 63%	9 11 9 11	Own Own	Yes	:	4.10	.724	2.61	1.65	3.17	Spi Spi	3	Spr	Own Own	SF SF	Нур Нур	7.83 7.83
KaiserK491-K492	BB	Dff	No	6	91/4	WG	Yes	No	4.09	No	2.57	1.55	3.48	Uni	3	Spr	Spi	SF	Нур	718
Lincoln9EL Lincoln9EH	Long Long	Dff Dff	No No	7 7	10½ 10½	WG WG	Yes Yes	No No	3.91	.724	2.52	1.51	3.15	Spi Spi	2 2	Spr Spr	Spi Spi	SF	Нур Нур	81/4
Mercury9CM	ВВ	Dff	No	63/4	10	Own	Yes	No	3.91	.70+	2.81	1.60	3.62	Mec	2	Spr	Spi	SF	Нур	7.8
Nash	BB BB	Dff	No No	58/8	8 10	Own Own	Yes Yes	No No	4.40	.70+	2.57	1.62	3.48	M-S M-S	1	H	Own		Нур Нур	73/4
Oldsmobile Futuramic 76 Oldsmobile Futuramic 88 Oldsmobile Futuramic 98	BB No No	Dff	No	7	10	Own Own Own	Yes No No	† Yes Yes	4.10 3.23 3.63	No No	2.66 3.81 3.81	1.66 2.63 2.63	3.02 4.30 4.30	Mec Mec	2 2	SA SA SA	Own Own Own	SF SF	Нур Нур Нур	81/4
Packard		Dff Dff Dff	No No No	63/4 7 7	10 10½ 11	Own Own Own	Yes Yes Yes	No No No	3.90 3.90 3.92	.76+	2.43 2.43 2.43	1.53 1.53 1.53	3.16 3.16 3.16		2	Spr Spr Spr	Own Own	SF	Нур Нур Нур	
PlymouthP-15		. Dff	No	6	91/4		. Yes	No	3.90	No	2.57	1.83	3.48		. 2	Spr		. SF	Нур	85
Pontiac 6-25 Pontiac 6-26 Pontiac 8-27 Pontiac 8-28	Ini	Dff Dff Dff	No	6 6 6	91/2 91/2 91/2 91/2	Own Own Own	Yes Yes		4.10 4.30 4.10 4.30		. 2.67 . 2.67 . 2.67 . 2.67	1.66	3.02	Med	2 2	Spr Spr Spr Spr	Owr Owr Owr	SF SF	Hyp Hyp Hyp Hyp	814 834 834 834
Studebaker	ВВ	Dff Dff	No	53/8	8 91/4	WG WG	Yes Yes	No No	4.10	.70	2.60	1.63	3.5	Spi	3	Spr	Spl Spi	SF SF	Нур Нур	73
Willys	AB	900	No No	5 1	8#1 8½	. WG	Yes	No No	4.88	.70	2.60 2.60 2.60	1.63	3.5	3	. 2		Spi	SF SF SF	Нур Нур Нур	

ABBREVIATIONS

M

Ci

^{*—}With Long or Borg & Beck disc.
*—Through fluid flywheel with semi-automatic transmission.

†—Through fluid flywheel with semi-automatic transmission at extra

cost.

+—Available at extra cost.

(a)—Dynaflow optional at extra cost.

ABBRI
(b)—Hydra-Matic optional at extra cost,
(c)—Driven disc—Own and Borg & Beck,
Other parts—Own and Inland.
(d)—Vacuum assisted.
AB—Auburn with Borg & Beck plate.
BB—Borg & Beck Div.
Dff—Direct to flywheel face.
FD—Fluid drive.

ONS
Hyp—Hypoid.
Ini—Inland Mfg. Co.
Long—Long Mfg. Co.
Mec—Mechanics Universal Joint Div
M-S—Mechanics or Saginaw.
Roc—Rockford Drilling Mach. Div.
SA—Stabilising arm.
Sag—Saginaw Steering Gear Div.

SB—Spiral bevel.
SF—Semi-floating.
Spi—Spicer Mfg. Co.
S-S—Saginaw or Spicer.
Spr—Rear springs.
TT—Torque tube.
Uni—Universal Prod. Co.
WG—Warner Gear Div.

LUBRICATION, FUEL AND COOLING SYSTEMS

Parts manufacturers are anticipating the demands of high compression engines with new carburetion and injection systems. Pressure cooling is now standard on most cars. Lubricants suited to the new requirements of automatic transmissions and fluid couplings have been introduced.

				L	UBRI	CATI	ION					FUEL S	SYSTE	MS				CC	OLING	SYSTE	M
		0	il Pre	asur	To -	_						Carburetor			Make			Rad	iator		
MAKE AND MODEL	Type	Main Bearings	Connecting Rods	Wristpins	Camshaft Bearings	Tappets	Normal Oil Pressure Lbs. at Mph.	Crankcase Capacity Qts.—Refill	External Oil Filter-Make	Tank Capacity—Gal.	Make	Model Number	Size (in.)	Туре	Automatic Choke-N	Air Cleaner-Make	Muffler-Make	Туре	Make	Capacity-Qts.	Full Length
BuickSpecial 40 BuickSuper 50 BuickRoadmaster 70	PP	Y	Y	NNN	Y	N N N	35-35 35-35 35-35	5½ 5½ 7	No AC AC	19 19 19	S-C S-C S-C	(a) (a) (a)	1 1 1	DD DD DD	S-C S-C S-C	AC AC AC	W-H W-H	VC VC TF	Har Har Har	13† 13† 16¾°	No No No
Cadillac 61 Cadillac 62 Cadillac 60 Cadillae 75	PPP	Y	Y	N N N	Y	7 7 7	35-30 35-30 35-30 35-30	5 5 5 5	No No No	20 20 20 20	Car Car Car	(c) (c) (c)	11/4 11/4 11/4 11/4	DD DD DD	Car Car Car Car	AC AC AC AC	W-M W-M W-M	TF TF TF	Har Har Har Har	18 18 18 18	Ye Ye Ye Ye
ChevroletFJ-FK	PS	Y	PS	N	γ	N	14-39	5	No	16	Car	W1-574S	11/4	SD	No	AC	Var	RC	Har	15	Ye
Chrysler C-38 Chrysler C-39 Chrysler C-40	PP	Y	Y	N N N	Y			5 6 6	AL AL AL	17 20 20	Car Str Str	**********	1½ 1¼ 1¼	SD DD DD	Sis Sis Sis			Cel TF TF		17 26 26	Ye Ye Ye
CrosleyCC	P	Y	Y	N	Y	N	35-50	21/23	Fm	61/2	TII	DY-9B	1	SD	No	US	Own	TF	Yng	4	No
De SotoS-11	P	Y	Y	N	Y			5	Pur	17	Car		11/2	SD	Sis			Cel		17	Ye
Dodge	P	Y	Y	N	Y			5	Pur	17	Str		11/2	SD	Sis			Cel		15	Ye
FordSix 98HA FordEight 98BA	P	Y	Y	N	Y	N	57-60 57	4	Var	17 17	Own	AA-1	-	SD	No No		Var Var	TF TF	Own Own	17.3 22	Ye
Frazer	P	Y	Y	N	Y	γ*	35-30	5	Pur	21	Car	WCD	11/4	DD	Car	AC	Hay	Cel	Fed	131/2	Ye
Hudson 6, 491-492 Hudson 8, 493-494	P (b)	Y	Y	Y	N N	Y	3	7 7	Mic Mic	20 20	Car Car	WDO-647S WDO-648S	11/4 11/4	DD DD	Car Car	AC AC	Old Old	TF	MC MC	18 18	Ye
KaiserK491-K492	P	Y	Y	N	Y	A.	35-30	5	Pur	21	AC	WCD ^a	11/4	DA	Car	AC‡	Hay	Cel	Fed	131/2	Ye
Lincoln	P	Y	Y	N	Y	Y	50-40 50-40	6	Fm Fm	191/2	Hoi Hoi	885-FFC 885-FFC	協	DC	Hol	AC AC	Old	TF	MM	34½ 34½	Ye
Mercury	P	Y	Y	N	Y	N	57-40	5	Fm	191/2	Hol	885-FFC	**	DC	Hol	Oa	Var	TF	Own	223/4	Ye
Nash	P	Y	Y	N	Y	N N	50-30 50-30	5 6	Pur	20 20	Car Car	WAI-683S WAI-694S	11/4 11/4	SD SD	Car Car	AC AC	Wal Wal	TF	MC MC	14 17	Ye
Oldsmobile Futuramic 76 Oldsmobile Futuramic 88 Oldsmobile Futuramic 98	PP	Y	Y	Y	Y	N Y Y	40-30 40-30 40-30	5 5 5	No No No	18 18 18	Car Var Var	WA-1	1½ 1⅓ 1⅓ 1⅓	SD DD DD	Car Var Var	AC AC AC	W-H W-H W-H	TV TV	Har Har Har	18½ 21½ 21½	Y
Packard	PP	Y	Y	Y	Y	Y		6 8 7	Pur	17 20 20	Car Car Car	WDO-644S WDO-643S WDI-531S	1½ 1½ 1½	DD DD DD	Car Car Car			TF TF TF		18 20 20	
Plymouth	P	Y	Y	N	Y			. 5	Pur	17	Car		13/2	SD	Sis			Cel		15	Y
Pontiac 6-25 Pontiae 6-26 Pontiae 8-27 Pontiae 8-28	P	Y	Y	Y Y Y	YYY	N N N	37-40 37-40 37-40 37-40	6 6 6	No No No	17 17 17 17	Car Car Car	WAI-537S WAI-537S WCD-630S WCD-630S	11/4 11/4 11/4 11/4	SD SD DD DD	Car Car Car	AC AC AC	Var Var Var Var	Cel Cel Cel	Har Har Har Har	18 18 19½ 19½	YYY
Studebaker	P	Y	Y	N	Y	Y	40-30 40-30	5	No Fm	17 17	Car	WE-661S BXOV-26	11/4	SD SD	Car	AC AC	Wal Wal	Cel	MC MC	10 13	Y
Willys 4-63 Willys Jeepster VJ-2 Willys 6-63	PS	Y	Y	N	Y	N	35-30 35 35	4	Pur	15 15 15	Car Z-C Car	613S WO-631S	11/4 11/4 11/4	SD SD SD	No	Oa		TF Cel Cel	Jam	11 11	Y

16

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54 2 7}}

711

7.8

8%

834

y, 1949

⁻With heater, 18 Qts.

-With heater, 141/4 Qts.

-With oil filter.

-Venturi 1.217.

-Venturi 1.217.

-Wodel 492 uses WA-1.

-Model 492 uses WA-1.

-Model 492 uses dual down draft.

-Weater a the company of the compa

ABBRE

(c)—Early production WCD-682S.

Later production WCD-722S.

AC—AC Spark Plug Div.

AL—Auto Lite.

Car—Carter Carburetor Co.

Cel—Cellular.

DD—Dual downdraft.

DC—Dual downdraft, concentric with side inlet.

Fed—Feeders Mfg. Co.

Fm—Fram Corp.

Har—Harrison Radiator Co.

Hay—Hayes Industries.

FIONS
Hol—Holley Carburetor,
Jam—Jamestown,
MC—McCord Radiator Co,
Mic—Michiana.
MM—McCord and Modine,
N—No. Oa—Oakes,
Old—Oldberg Mfg. Co. P—Pressure,
PS—Pressure stream and splash.
Pur—Purolator Prod. Inc.
RC—Ribbed Cellular.
SC—Stromberg or Carter.
SD—Single downdraft.
Sis—Pierce Governor Co.

Str—Stromberg Carburetor Co.

TF—Tube and fin.

Til—Tillotson Mfg. Co.

TV—Tubular vec cell.

US—United Specialties.

Var—Various.

VC—Vec cellular.

Wal—Walker.

WH—Walker or Hayes.

W-M—Walker or Michigan.

V-Yes. Yng—Young Radiator Co.

Z-G—Zenith 28BV-10 or Carter Wal
631-S.













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Styling Featured in '49 Studebaker

Improved performance and more luggage space also emphasized

MONG other Studebaker changes is a stepping up of performance in both the Commander and Champion engines. The stroke of the Commander engine has been increased from 4% to 4% inches, bringing the power output up to 100 brake horsepower at 3400 rpm as compared to the 94 horsepower at 3600 rpm obtained heretofore. The increase in Champion performance results from the adoption of a new carburetor and slight changes in the valve lift and the intake manifold.

Also in the case of Champion models, better cooling is provided by a larger radiator, the capacity of which has been increased 10 per cent to 11 quarts. Tire size in this series has been increased from 5.50×15 to 6.40×15 .



The steering wheel on the Champion has been increased to 18 inches in diameter. The Commander Regal Deluxe closed models and convertibles as well as the Land Cruiser have a three-spoke wheel. As in the past, the position of the steering wheel can be altered to suit the size of the driver by simply changing the mount
(Continued on page 98)



"No police chief alone can break that jam, Mr. Mayor—this town needs a top-notch traffic engineer!"

America must find room for more than 40 million cars and trucks — and that's no easy job!

THIS police chief is right. It takes more than *his* badge of authority to speed the flow of traffic and eliminate congestion.

What his city needs is a practical, intelligent plan—with adequately trained men to carry it out—and plenty of co-operation from the public, of course.

No mayor or city manager, and no group of public spirited citizens alone, can possibly decide by themselves how to end traffic snarls, delays and accidents.

The problem demands thoroughly professional study and diagnosis—and more and more municipalities are now beginning to recognize this.

Steps in the right direction

They've taken steps in the right direction in Milwaukee, Detroit, Den-

ver, Seattle, Buffalo and Dallas, to name just a few places.

These cities—and numerous others—are giving their police departments the continuing help of experienced, competent, resource-ful traffic engineers—men who know how to get results with a minimum of public inconvenience.

Sound planning gets results

In Detroit, the result has been to speed vehicle movement considerably—with a 50 per cent decrease in accidents!

Milwaukee has been made one of the safest cities in the country.

Any community can effect comparable improvements in its traffic set-up, if sensible, feasible programs are adopted for better use of its present streets.

What traffic conscious America needs is not more restrictions on its cars, trucks and buses, but more up-to-date methods of routing them in everybody's best interest.

New safety for pedestrians as well as vehicle occupants is usually the result of smoother traffic flow. In fact, the record shows that almost every measure which reduces street congestion also reduces accidents.

As a nation-wide observer of what competent traffic management can accomplish, Studebaker feels that there's virtually no limit to the progress that can be made.

STUDEBAKER

AMERICA'S GREAT PROGRESSIVE IN TRANSPORTATION SINCE 1852

© 1949 The Studebaker Corp'n, South Bend 27, Indiana, U.S.A.

Profit Opportunities . Continued from page 59

70

Trico Products Corporation of Buffalo, N. Y., introduces two new and more powerful Windshield Wiper Motors — one vacuum-operated, the other air-pressure. The manufacturer states that the new FPK Pressure Motor built by Trico has, besides an



output of greater torque, a controlled cushioned arc in the stroke, avoiding all mechanical impact and including also automatic parking of the arm and blade. The new CHM Vacuum Motor is designed to deliver a higher torque for use on motor cars especially where curved glass wiper arms and blades are now being employed.

71

The Ramsey Corporation, St. Louis, Missouri, has developed a new retaining ring called the Spirolox, which is made of a flat spring steel strand wrapped twice around itself. This Spirolox designed to position and lock moving parts on shafts and in housings, eliminating nuts, keys, caps, pins, and such locking and positioning means. Due to its design, the elimination of the strand property of the strand propert

nation of the gap eliminates the dynamic unbalance encountered in conventional horseshoe-shaped retainers, and is said to provide bearing surface for thrust loads at all points on the ring's circumference. The holding strength is equally distributed around the circumference of this ring.

72

The Hove Spark-O-Liner Corporation, Minneapolis, Minnesota, is now marketing the Perry Cooling System Filter, designed to clean both the motor block and radiator of lime, rust, and other debris. It is said to filter out the system completely. The Perry chemically activated filter is designed



to soften and clean the cooler and break up the accumulation of deposits in the radiator and cooling chambers of the motor block. This foreign matter, which is kept in suspension in the coolant. is filtered and deposited at the filter. Heavy sludge is also said to be removed and settles in the bottom of the visible sump.

73

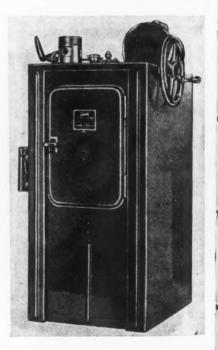
Remington Rand, Inc., New York City, New York, has developed the simplified Unit Invoice Accounting Plan, designed to enable the omission of posting to an Accounts Receivable Ledger. Invoice copies are dropped into Kolect-A-Matic pockets, indexed by name of customer and signaled to indicate the age of the oldest unpaid invoice. Kolect-A-Matic panels in Kolect-A-Matic trays are housed in a Single Pedestal Safe-Desk. The manufacturer states that operators have a complete Accounts Receivable Record at their fingertips, which is secure against fire and unauthorized tampering.

74

The Victor Manufacturing & Gasket Company, Chicago, Illinois, offers with its two selections of Victoprene Oil Seals an enamelled all-steel display cabinet at no extra charge. This cabinet, designed for shelf, counter, or wall display, comes with assortments known as JV-21 and JV-22.

75

The Wilkening Manufacturing Company, Philadelphia, Pa., is manufacturing the Pedrick Thermo-Sizer. This machine is used for the "heat shaping" method of restoring worn, collapsed pistons to an accurate fit in each cylinder. Pistons are heated to about 750 degrees F. in a thermostatically con-



trolled electric oven. While at this temperature each piston is removed from the oven and expanded with a special apparatus built on the Thermo-Sizer. After shaping to the correct size, the piston is cooled by quenching in water, and measured with micrometers.

(Continued on page 126)

MAIL THIS COUPON:

For further information on any of the products mentioned in Motor Age write the code number of the product in the space provided below. Don't forget your name and address.

Frank P. Tighe MOTOR AGE Chestnut & 56th Sts., Philadelphia 39, Pa.

One *Quality* Line of INLITE BRAKE LININGS

means Top Service and Top Profits!

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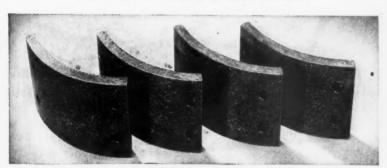
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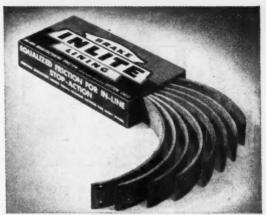
It's the user who suffers first from second-quality brake linings. But the dealer who sells and installs them is a close second, and he suffers longer—in lost good will, trade and profits! That's why Inlite Brake Linings are made in only one quality—top quality, for top user satisfaction and top dealer profit.

Seventeen Inlite composition formulas assure the correct friction for all brakes on all models. All segments have the same uniformity of structure and long-wear factor. And all Inlite Linings are tested and proved in General Motors Research Laboratories and on the Proving Ground.

THE INLITE LINE IS COMPLETE



Inlite Friction Blocks
For all types of commercial service



Matched Sets for Popular Cars and Trucks
Wide range fits bundreds of models



Matched Sets for Universal Application They cover a wide variety of cars and trucks



Truck Segment Sets
For beavy-duty applications



Brake Linings

INLAND MANUFACTURING DIVISION . General Motors Corporation . DAYTON, OHIO

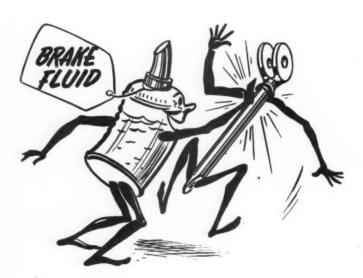
MOTOR AGE, January, 1949

SHOP KINKS

\$5 for all Kinks published each month



Installing Hydraulic Brakes on a 1937 Ford



Buy a complete set of 1939 Ford brake parts. Install the clutch and brake pedal assembly on the opposite side of the frame from which they were removed. Bolt the assembly on the two top holes and drill two new holes for the bottom. The only change necessary is in the clutch adjustment. Part of the frame has to be cut to get room for the master cylinder and brake pedal. Cut a hole in the floor board over the master cylinder to fill it. File the floor board to make room for the clutch and brake pedal, and bend the left hand stay rod to clear the pedal. M. Gilbert Meyer, Greenwood, Wis.



Lowering Hoist on Tire Breaks Bead Easily

In removing tires from drop center rims, I have found that the easiest and quickest way of breaking the bead is to place the edge of the tire under one of the rails of the hoist and let the hoist down on the tire. This will instantly break the bead even on late model Chrysler cars and since very few hoists have sharp edges on them, the tire will not be damaged. L. D. Johnston, Coudersport, Pa.

Model T Coil Used To Analyze Spark Trouble

There are a lot of mechanics that get Fords in the shop that won't get spark to the plugs, so they think it's the points. I have found that it is often the coil or condenser, and to find out which one it is, take out the coil, put in a piece of heavy cardboard in its place, bolt it down, put a hole over the center of the rotor or where the carbon hits the rotor. Get a Model T coil or a bus coil which has three leads, one for the ground, one for the battery, the other for the distributor. When all three lines are hooked up to the Model T coil or bus coil, you are ready to start, you do away with your ignition system. Frank Capeci, 2111 Richmond Terr., Staten Island 2, N. Y.



THE DOCTOR OF MOTORS

Rumor Page



IT'S RUMORED THAT: Voltage at your spark plugs is 10 times that of an electric chair!

True. The voltage of an electric chair is between 1800 and 2200 volts with current of 3 to 4 amperes. But flashes of 20,000 volts jump across the points of your spark plugs.

Contributed by Robert F. Bahl, Pittsburgh 5, Pa.*



IT'S RUMORED THAT: It's the man who buys the car!

According to a recent survey of 1145 men, 76% said they picked the car. When the same question was asked of the women, they agreed! Who'd believe so many wives agreed with their husbands? (Of course we would, Dear!)



IT'S RUMORED THAT: 500 and 5000 means magic!

It sure does to an old engine! Because Perfect Circle Series 500 and 5000 are the sets Custom Made for the worst jobs. These sets include the famous Sectional Steel Oil Ring, the ring that has given new power and new savings to millions of old engines. Proof of magic!



IT'S RUMORED THAT: Saturday is now the most dangerous driving day!

Last year for the first time in history, Saturday became the most dangerous day of the week on the highway. The reason it out-accidented Sunday is the change from the 6-day to the 5-day week. Rather work Saturday . . . or else?

*Perfect Circle pays \$50.00 for any Rumor accepted for this page. None can be returned or acknowledged, and all become PC's property. Send yours to Perfect Circle Corporation, Hagerstown 11, Indiana.



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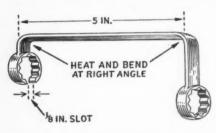
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1949

Surer than the races, steadier than hitting the jackpot. The faster you write 'em, the richer you get. 25 bucks for one lucky fellow! So grab your pencil and spike at least a fin. Send along your idea—write it or draw it, anyway that we can understand it—some short cut to make a job easier, some special tool you can't buy, some kink of your own. We won't accept any printed by another publication.

Box Wrench Makes Good Light Switch Tool

When installing a Chevrolet light switch, I'd ask every tool man that would come in for a tool that would reach the nut that holds the switch in place. Finally, I made a tool for this purpose. Taking a 9/16 inch box socket, I heated it right behind the head, bent it at a right angle to the handle and then cooled it fast, to retain the temper in it. Hammering out any of the bends



to form a straight handle I drew another heat line about 5 inches from the socket and bent it at right angles to the handle and the same way the head was bent, to form a handle. Slotting the 9/16 inch socket so that it would fit over the pull rod of the switch, I had a perfect tool that saves a lot of time. Jewell Beauchamp, Beauchamp Motor Parts, Oakland City, Ind.

Priming Chevrolet Oil Pump Without Dropping Pan

Here is an idea that may help some one, at least it surely did help us. We installed a new Chevrolet engine complete. When we started it there was no oil pressure and every means to prime the oil pump failed. We were about ready to remove the oil pan when this idea came to mind—remove the distributor (checking the position of the rotor so as not to get it out of

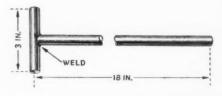
time) and with a small electric drill and an 8 inch by ¼ inch welding rod flattened on one end like a screwdriver, insert the screwdriver end in the oil pump slot. Turn on the drill until the pump picks up pressure. Replace the distributor and start the engine and all is well. Edward Sweat, 107 Gilmour Court, Owensboro, Ky.

Pliers Make Universal Joint Lock Tool

For want of a tool that would quickly unlock Pontiac, Olds, and other universal joint locks, I have taken a cheap pair of pliers and brazed on the tip of one jaw a small strip of steel. After filing it to an edge I heated it again, being careful not to melt the brazing and quenched it in water. A good quality of steel must be used. I used an old snap ring that was tempered well.—Leonard Antinazi, Jr., Rt. #1, Doraville, Georgia.

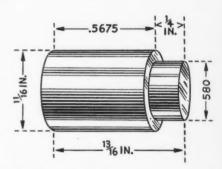
Packard and Cadillac Valve Adjusting Tools

I have made a tool for checking the tappet clearance on Cadillac engines when the lifter assemblies



are removed. The tool is easily made by taking a piece of 5/16 inch round stock and cutting to exactly 3 inches and then welding an 18 inch handle to it.

Also, here is a way to make a handy tool for adjusting Packard valves. Take a piece of 11/16 inch round stock and machine a ¼ inch shoulder on it. The overall length



should be 13/16 inch. The barrel should measure exactly .5675 inch from the shoulder. This measurement is most important. The shoulder end should measure approximately .580 in. To use it, remove the hydraulic lifter and set tool in its place. Then measure clearance between the tool and the valve stem which should be from .030 to .070 inch. Al Ruedy, c/o United Auto Service Co., 2300 Webster St., Oakland 12, Calif.

Installing 2nd Speed Lock Nut on Transmissions

On some of the earlier model transmissions on the Dodge and Plymouths the lock that holds the second speed gear on the main shaft is pretty difficult to install. An easy way to do this follows:

First, put the spring and lock pin in their places. Second, lay a piece of feeler stock ¼ inch wide and .008 inch thick over the pin and slide the second speed gear on. Third, slide lock washer over feeler stock and turn to its proper position. Remove feeler and gear is locked. Jim Justice, Miles Motor Co., Taylor, Texas.

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vived the contacts occasionally, say once yearly. Since the write-offs, the debtors have seen better days and settled when properly approached, either by personal contact or letter. Buried in the ledgers of automotive businessmen are many old accounts that could be collected at a nice profit if the debtors were looked up again.

If the accounts are unpaid because the debtors belong to the third group, those that say they are unable to pay, it may be advisable to consult an attorney, your banker, the local credit and collection agency or the Chamber of Commerce. In many cases, they have the facilities to handle such matters or can advise you as to

the most suitable procedure

Beware of fake collection agencies. These racketeers do the country and are putting on the pressure to acquire old accounts while money is still plentiful. If you do business with a collection agency, select a local organization.

In some cases, it may pay to have a credit investigation made to determine the current status of the debtor who claims he is unable to pay. The local credit bureau will make this investigation for a small fee. Sometimes the local Chamber of Commerce operates a credit bureau. Fees are usually higher for non-members, but not excessive in any case. It may cost a few dollars to have these investigations made but it may pay big dividends. We know one repairman who spent \$22 for credit reports on debtors who claimed they were unable to pay and collected more than \$400. Of course, the time to check the credit of a new customer is before you let him have the credit. but even where this precaution has been taken, it may be desirable to check the customer again should he ever become a hazardous account.

Some businessmen have a practice of going over their books every 5 years and calling for current credit reports on all accounts. On all accounts over 4 years old, collection experts state that it is wise to

(Continued on page 90)



"They love that trick. He uses real bourbon."



From Radiator to Gas Tank... your best buy in Solder!



MOTOR AGE, January, 1949

1949

OFFICES IN PRINCIPAL CITIES ACROSS THE NATION

Take the Red Out . . Continued from page 88

take judgment. In most states, this will extend your protection under the statute of limitations from 6 to 20 years. Then too, such action frequently prompts a debtor to settle in part, at least, immediately. Sometimes the mere serving of a summons is enough to effect settlement. If you take such a course, follow through on your judgment

or lien with every legal recourse, garnishment or attachment. However, in some cases, when all these legal measures have failed to collect, the creditors have eventually gotten their money, so don't file away a judgment and forget it, as most businessmen do. A repairman told us recently that a debtor against whom he had taken a judg-

ment in 1936 paid him \$207 as a result of a little personal persuasion, plus an appeal to his moral side. Sometimes "you can catch more flies with honey than with vinegar." Collecting has its psychological approach, just like salesmanship. Once you have taken judgment and can't collect, check up on the debtor once a year. If you have reason to contact him, be decent about it and you may cash in some day.

Sometimes a debtor will move away owing a bill and leave no forwarding address. Some repairmen write off these debts assuming that it will cost too much to trace them. Every credit association has a "skip tracer" service consisting of reciprocity agreements with similar organizations all over the country to trace "skips" and will do the work for a comparatively small fee. In October 1948, one repairman located a debtor 400 miles away by means of a "skip tracer" service. With the aid of the local credit agency, he collected \$145 due him. The debtor had jumped the town and left the repairman holding the bag on the account.

Small bills, \$5 or under, are a source of heavy loss to repairmen, particularly if the debtors renege on payment. The best way to bypass this headache is to get cash for merchandise and jobs of small monetary value. "It doesn't pay to try to collect them," is the usual

(Continued on page 92)



BRAKE-TROL automatically takes hold the moment the car comes to a stop; automatically releases the moment the accelerator is touched. There's no roll or creep. The operator does not have to keep his foot on the brake, hold the emergency, or ride the clutch. Everything is automatic. Driving is simplified; fatigue is lessened; clutch wear is saved; jumpy hill starts are avoided.

Entirely automatic, no switches to touch.

BRAKE-TROL is electrically operated. There are no switches, levers, gadgets, pedals or buttons for the operator to bother with.

Everything is automatic.

Easily installed.

BRAKE-TROL can be installed in less than one hour.

It's safe

Brakes cannot be engaged while the car is in motion.

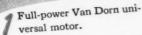
The most useful accessory ever offered.

BRAKE-TROL really does something for the driver; relieves him of effort hundreds of times a day — everytime he stops the car.





"Do you like the seat covers, dear?"



- Spiral beveled gears of heat-treated alloy steel, match-lapped for smooth performance, spline-mounted for greater strength.
- 3 Commutator, bearings and switch sealed against abrasive dust or dirt.
- All ball bearings on steel inserts and grease-sealed.
 - Needle roller bearing maintains spindle alignment.
 - Patented spindle lock for speed and ease in changing a variety of accessories.

000 000

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Left: Speed Wire Brushing

You can SPOT the Difference in a VAN DORN SANDER

... in Finer Engineering ... in Faster Surfacing!

From switch to spindle, powerful Van Dorn Electric Sanders are built to take it! Motor, gears, bearings, spindle—all are built for years of productive service on the toughest surfacing jobs. And Van Dorn Sanders are so amazingly versatile that they'll speed up job after job in your shop—from smoothing fenders and body panels to grinding down welds and removing rust, dirt and road tar. Ask your nearby Van Dorn Distributor for details on these models: 7" Standard Sander, van Dorn Distributor for details on these models. I Standard Sander, \$76.00; 9" Heavy-Duty Sander, \$76.00; 9" Heavy-Duty Sander, \$92.00. Write for free catalog of over 100 Portable Electric Tools to:

The Van Dorn Electric Tool Co., 727 Joppa Road, Towson 4, Md. FOR POWER

PORTABLE ELECTRIC TOOLS





Left: Sand Any







Take the Red Out

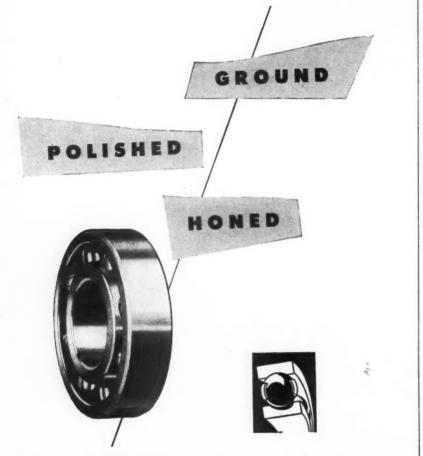
Continued from page 90

reply when one suggests pushing these delinquents for payment. We had to write off \$450 in small accounts under \$5, which represented a loss over three years for a repairman client. He has to do \$5,000 in repairs to make up for this loss. Even if turned over to a collection agency, the charge for collection is usually 50 per cent of

the bill, so get your money in cash for small jobs.

The fourth classification, those who take their time about paying should be educated to pay promptly now. If a buyer's market comes back into the picture these chronic slow payers may fall into the bad debt category. It happened before —around 1929—the year of the big

stock market bust. Many customers who were good pay before 1928 were bad pay afterward. One reason why credit customers pay as they please is lack of a good collection system. From our observations in the field, we find that 75 per cent of the repairmen who have "pay-as-you-please" customers are themselves to blame for this attitude because they never send out monthly statements on time and never punch up a delinquent. If you sell on 30-day terms, make the customer understand that you mean 30 days. This is one of the best bets against a high ratio of uncollectibles and heavy bad debt losses if business tapers downward and money and jobs become less plentiful.



Only HOOVER does all three

Modern machines are being constantly designed for faster operating speeds. These higher speeds demand bearings with raceways so smooth as to reduce friction to a minimum. Grinding and polishing of ball bearing raceways is no longer sufficient. To provide the mirror-smooth surface necessary at high speeds, Hoover has developed a method of honing the raceways by production line methods. That is why manufacturers, everywhere, are finding that Hoover Ball Bearings have 30% longer life . . . 30% greater load carrying capacity . . and a smoothness and quietness heretofore unheard of.

THE ARISTOCRAT



America's only Ball Bearing with HONED RACEWAYS

HOOVER BALL AND BEARING CO. ANN ARBOR, MICH.



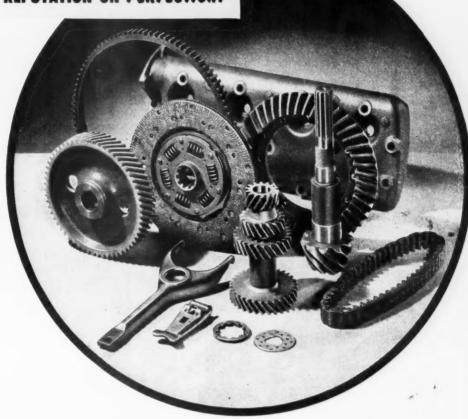
"Of course it's home cooking. Your wife just got a job in the kitchen!"

\$73 Million Spent by Dodge Dealers on Improvements

Expenditures of \$73,249,405 have been made by Dodge dealers in the postwar period for new or enlarged buildings to provide improved service to their customers, E. C. Quinn, general sales manager of the Dodge Division, announced recently.

The survey disclosed that the Chicago region led the 20 national Dodge regions with \$3,945,000 in new buildings and \$4,152,500 in enlarged buildings for a total of \$8,097,500. The New York region was second with \$2,146,000 in new buildings and \$4,467,000 in enlarged buildings for a total of \$6,613,000.

YOU CAN STAKE YOUR REPUTATION ON PERFECTION!



"PRE-FITTED" PARTS FOR PERFECT REPLACEMENT



Fast, easy installation is assured with Perfection Certified Replacement Parts. Every step of manufacture is a matter of precision workmanship to achieve "pre-fitted" uniformity for perfect replacement.

Over 28 years of manufacturing achievement, coupled with rigid standards of control and inspection, have achieved a reputation for dependability in PERFECTION products. Use of the finest materials, heat treating under scientific control, and precision accuracy throughout production assure continued high PERFECTION quality.

There is a PERFECTION jobber near you. He carries a representative stock of these quality parts and is prepared to render prompt, efficient, friendly service. If you do not know his name, write us.

PERFECTION GEAR COMPANY . HARVEY, ILL.

PERFECTION PRODUCTS INCLUDE: Silent Timing Gears, Metal Timing Gears, Silent Timing Chains, Transmission Gears and Parts, Differential Ring Gears and Pinions, Differential Cases and Parts, Fly Wheel Gears, Cylinder Heads, Clutch Plates, Pressure Plates, Clutch Cover Assembly Parts, Clutch Forks and Parts, Clutch Rebuilders.

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'49 Oldsmobile

the exhaust valve is 1 7/16 inches in diameter. The spark plug is of 14 mm size.

Five main bearings of Durex 100A type are used, $2\frac{1}{2}$ inches in diameter for Nos. 1, 2, 3 and 4 and $2\frac{1}{8}$ inches in diameter for No. 5 which takes the thrust. Connecting rod bearings are of Durex type and are $2\frac{1}{4}$ inches in diameter.

Clearance of the piston with the cylinder wall is held to the minimum of 0.0005 to 0.001 in. It is tin-coated and has three rings—two, 5/64-inch compression rings and one 3/16-inch oil ring.

Continued from page 60

The intake manifold with separate branches for each bank of cylinders is cast integrally with branches from the exhaust manifold for heating the mixture, and includes the water manifolding to the heads. The down-draft, dual throat carburetor, is of a new design produced by one of the GM divisions and has the unique feature that all of the major parts of the carburetor are mounted to the cover. Thus the removal of six fastening screws makes it possible to remove the entire operating mechanism for inspection or adjustment.

Another interesting feature, contributing to compactness, is that the timing gear cover is made of cast iron and incorporates as an integral part the water pump body.

Separate exhaust manifolds are employed with a cross-over from the left bank to the right hand side forward of the engine.

The accessories drive at the front has two separate wedge type belts -one for driving the fan, the other for driving the generator which is mounted overhead near the center. The fan and water pump drive is at 0.85 of the engine speed. The fuel pump is mounted on the right hand side at the front; the ignition distributor at the rear; and the coil at the top center just ahead of the distributor. An oil filter of fullflow type is used to protect the lubrication system, particularly the hydraulic valve lifter lines. It is mounted horizontally on the right hand side at the lower level of the crankcase. The lubrication system has a capacity of 6-qt. including the filter.



successor to tune-up oils for crankcase winterizing

E-ZE START is more effective and longer lasting than ordinary tune-up oils that are sold for crankcase winterizing, and which contain very light oils and kerosene; many of these destroy the viscosity and carrying capacity of the oil, thereby causing metal to metal contact, friction and wear.

E-ZE START acts as a pour point depressant, permits oil to flow more freely in sub-zero temperatures and adds an E.P. value to the oil to increase its load carrying capacity; to provide easy starting and instant lubrication, and to reduce friction and wear.

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i	LUBAID CO., Milwaukee 1, Wis. 1M
1	West Coast - 1333 W. Olympic Blvd., Los Angeles
i	East Coast - 20 W. 60th St., New York City
1	Please send us complete information on E-ZE
ļ	START with prices and instructions for ordering
ł	Name
i	Address
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"Why can't he just scribble on the wall like other kids, Doctor?"





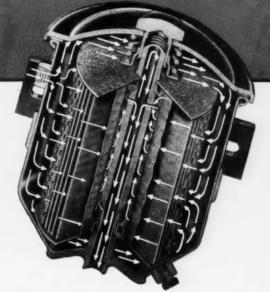
Here's cold-weather protection that prolongs engine life . . . saves money for your customers!

MoPar Oil Filters and Elements are specified for replacement by Chrysler Corporation engineers. They are offered by Chrysler Corporation, for Plymouth, Dodge, De Soto and Chrysler cars and Dodge "Job-Rated" trucks.

You'll find plenty of prospects for MoPar Oil Filters all around you. And you also get plenty of steady, repeat business by featuring MoPar Replacement Elements.

So go after these prospects by checking the oil filter on every Chrysler Corporation-built car or truck you service.

CHRYSLER CORPORATION - PARTS DIVISION Detroit 31, Michigan





SUPER-FINE! New plastic cellulose micronic filter material stops abrasive particles as tiny as .000039 of an inch.



BIG CAPACITY! More sludge and harmful grit can be removed from the oil because accordion pleats triple amount of filter surface.



EASY TO SERVICE! On replaceableelement types, simply remove the nut on the filter cover, lift off the cover and slip out the element.



3 TYPES OF FILTERS! Sealed Type and Thrift Type for Chrysler Corpora-tion-built cars. Heavy-Duty Type for Dodge "Job-Rated" trucks.



REPLACEMENT ELEMENTS! Complete line of replacement elements to fit all MoPar Oil Filters. Includes special element for Full-Flow Type Filter used in late-model Chrysler cars.

Here's where to find MoPar Oil Filters

You can get MoPar Oil Filters and Elements from Plymouth, Dodge, De Soto and Chrysler dealers.

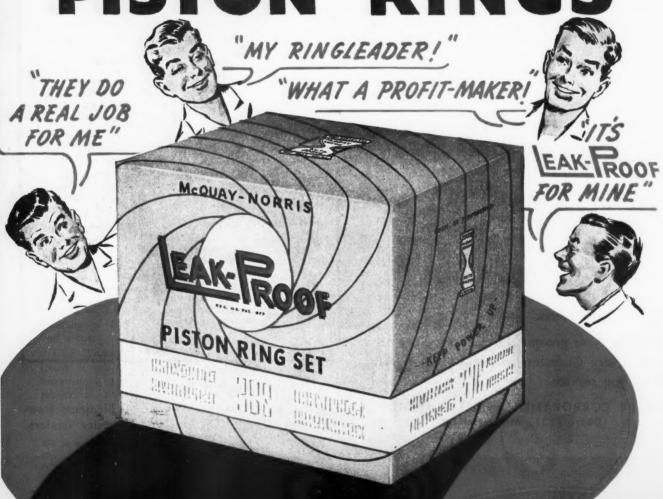


Always Install MoPAR parts in PLYMOUTH · DODGE DE SOTO · CHRYSLER CARS DODGE "gob-Rated" TRUCKS

You called em GREAT

EAKEROOF

PISTON RINGS



EAK-PROOF... the talk of the trade

They'll be THE LINE

in 119

"I LIKE THAT PHOSALLOY TOP RING"

LEAK-PROOF Piston Rings are not only good for old cars, they are also good for new business. Customers know LEAK-PROOF

... know what they do for them. Install only
LEAK-PROOF Piston Rings and learn what they do for you in performance and profit.

"NOTHING LIKE EM FOR ME"



suaranteed

TO DO ALL



2 Keep power up

3 Give smooth, new motor operation

Give longer life

yes GUARANTEED

give satisfactory performance for 10,000 miles or one year, whichever shall occur first, under the McQuay-Norris LEAK-PROOF Piston Ring Replacement and Labor Guarantee available upon request.





LEAK-PROOF will be the hottest line of the year. 1—Because of their modern design. 2—Because of the tremendous volume of advertising and merchandising McQuay-Norris puts behind them to help you sell. The public goes for LEAK-PROOF Piston Rings. Be smart, go for LEAK-PROOF too.

McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS, MO.

ing bracket under the dash panel.

Space available for luggage has been increased in all Studebaker models. This has been done by mounting the spare tire and wheel vertically. Six suit cases can be fitted into the trunk without difficulty, according to the manufacturer, and the tire can be removed with little or no disturbance of luggage.

Wrap-around bumpers have been adopted for all 1949 Studebakers. They are heavier, larger than on previous models, and are completely redesigned. Additional frontal protection is provided by new high-type bumperettes, designed to prevent "overriding" in tight parking behind older model automobiles.

Either front door may be un-

locked from the outside with a key, even though the lock has been set by the handle from the inside. Windows can be raised and lowered with greater ease due to a change in gear mechanism. Built into the handle of the parking brake is a new push-button release which eliminates any chance of the brake's being released accidentally.

Windshield wiper action is improved through the use of a more powerful vacuum motor.

Heat output in the Studebaker Climatizer heating and ventilating system has been increased by about 15 per cent as the result of a newly designed core housing. Flow of air through this underseat heating unit is redirected to pick up the maximum Btu output from the hot water heating core.

The 1949 interior changes include the use of new fabrics and trim materials, as well as new design. In some models seat backs and cushions are in different patterns, set off by two-tone contrasts between the upholstery and the side-walls and head-lining.

For Studebaker's Land Cruiser, the stylists have continued the nylon fabric, first used for automobile upholstery by Studebaker in 1948, but have adopted a new colorful pattern.

All convertibles have genuine leather cushions and seat backs, with leatherette side-trim.

Instrument panels and window reveals, as well as steering wheels, are colored to blend with the new upholstery.

Rubber foam cushions, standard on the Commander series, are now available at extra cost on the Champion.







MOTOR AGE, January, 1949

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Business Forecast

Continued from page 39

Outlook Still Good in Automotive Replacements

F. E. Schluter, President
Thermoid Company

Because both candidates gave evidence of being "big government" proponents, the results of the national election, in my opinion, will not materially affect the immediate business outlook of our industry. Government and its political management has an important influence on business. The managers of business, therefore, will have to continue to steer with an eye on Washington maneuvers—as well as on the natural level of supply and demand.

The outlook for the automotive

replacement market is still good. Over 50 per cent of the 34 million cars and trucks on the road today need brake relining jobs. The other "wear and tear" parts outlook is also particularly hopeful. With our two manufacturing locations (we have completed our large new plant in Utah), Thermoid should get an increased share of this business.

1949 Profits to Those Who Know How to Sell

G. R. Walker, Vice President in Charge of Sales Walker Mfg. Co.

With the nation's car population the highest in history, with another year of heavy passenger car and truck production scheduled, and with millions of cars built since the war requiring increased service, 1949 should be a strong, high-volume year. Its profits will go to those car dealers and independent service establishments whose shops are clean and well equipped, and whose staffs know how to sell and render good service.

People Still Want to Go Places Sitting Down

L. M. Olson, Vice President R. M. Hollingshead Corporation

We firmly believe that 1949 will set another new high in automotive business. The market has again (Continued on page 104)



"There, dear, have a good cry. You'll feel better for it."

N E W Catalogue



on BEARINGS





Send It Today



This new . . . complete . . . up-to-date catalogue is yours for the asking. It lists and describes a complete automotive bearing service for all popular makes of cars, trucks and buses. It includes main, con-rod and camshaft bearings; piston pin, clutch pilot, steering knuckle, starter, generator, water pump, distributor and spring bushings. Every item in the book is of top quality, precision finish, equal in every respect to original equipment. Clip coupon and send it in today for your FREE copy. JOHNSON BRONZE, 455 South Mill St., New Castle, Pennsylvania.

Name		
Address		
City	State	
0	ZONE	

Lincoln Service Completely New



Functional in Design—A new conception in Service Merchandising Equipment is expressed in the functional design and ultra-modern styling of the new Lincoln Merchandiser. Primary features of the Merchandiser's functional design are easy accessibility to mechanic's tools and working accessories, and convenient storage space.



Sectional in Application—In addition to the Service Merchandiser, complete Model 2766, the dealer can now select the *combination* of Service Merchandiser Component Units he desires, and arrange them to best serve his department requirements. The complete model, or any of the various combinations, can be used in other locations than against a wall—ideal for "island" installation.







A40-3

Stylengineered—Proportions, working space, and storage facilities have all been specifically engineered to increase mechanic's efficiency, to offer the utmost in utility, and to compel customer confidence in Dealer's service.



MPANY



LINCOLN ENGINEERING COMPANY
Leaders in Lubricating Equipment for a Luarter Century
\$701 NATURAL BRIDGE AVE. ST. LOUIS 20 MO.

Ask your wholesaler for complete information or write us for a copy of Bulletin No. 512.

949

THOR'S GREAT N

THE MOST POWERFUL **ELECTRIC IMPACT WRENCH** EVER BUILT!

COMBINING TWO PROVED FEATURES!

> The famous Thor heavy duty electric motor . . . standard in Thor electric tools for 35 years.

The powerful, durable striking mechanism-of the same type so widely preferred in Thor pneumatic impact wrenches.

> See your Thor Distributor or Jobber today, or write for Circular No. 1025

EUMATIC

Aurora, Illinois

Birmingham Buffalo Los Angeles Salt Lake City Seattle

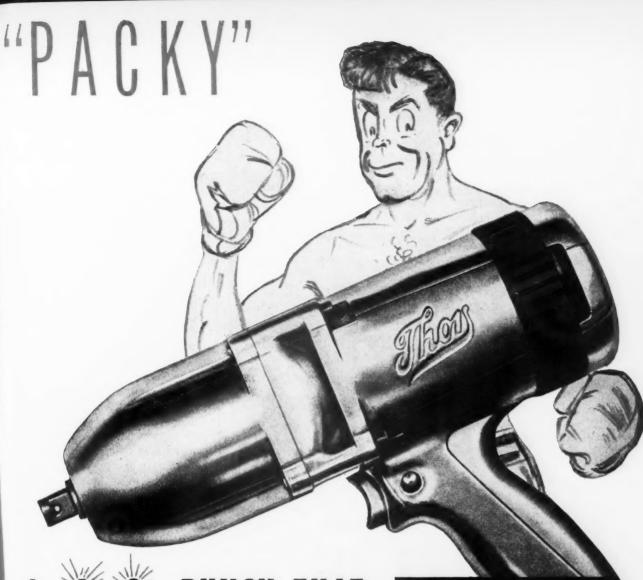
Export Division: 330 West 42nd St., New York 18, N. Y. Chicago **New York** San Francisco

Cincinnati Philadelphia Toronto, Canada

Denver Pittsburgh Sao Paulo, Brazil

Detroit

Houston St. Paul London, England



A 1 2 PUNCH THAT DELIVERS EFFICIENCY FOR

NUT SETTING • SCREWDRIVING • DRILLING
IN STEEL, WOOD, MASONRY • TAPPING
REAMING • HOLE SAWING • SANDING

The complete versatility of this great new Thor tool makes it a "must" for every production line, factory maintenance, garages, engine rebuilding shops . . . wherever power can get jobs done cheaper—faster!

Silver Line

Silver Line

ELECTRIC TOOLS

NEW 14", 5 16", 5 6" and 1 2" BRILLS
NEW 4", 5", 6" PORTABLE GRINDERS
NEW 7" AND 9" STANDARD AND HEAVY
DUTY SANDERS
HEW 7" STANDARD AND HEAVY DUTY
POLISHERS



PORTABLE POWER

TOOLS

PREUMATIC TOOLS . UNIVERSAL AND HIGH FREQUENCY ELECTRIC TOOLS . MINING AND CONTRACTORS TOOLS

MOTOR AGE, January, 1949

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been expanded by more than 3,000,-000 vehicles since last year's registration, and the servicing and maintenance of these units alone should add considerably to the revenue of the car dealer, the independent garage and automotive retailer.

In our own business, we feel there will be more need for automotive chemical products than ever before.

The average age of an automobile at this time is about eight years and of a truck only slightly less. This means that there will be plenty of maintenance work, parts and accessories required to keep these units in satisfactory running operation, and we expect that our products will be more widely needed than ever.

American people have a habit of wanting to go places sitting down, and we believe that 1949 will be the biggest traveling year this country has ever experienced. This, of course, will add tremendous revenue to everyone associated with the automotive market.

Flat Glass Industry Has Best Year in 1948

John D. Biggers, President Libbey-Owens-Ford Glass Co.

HE flat glass industry in the United States appears to be closing the best year in its history, according to John D. Biggers, president of Libbey-Owens-Ford Glass Company.

The belief that 1948 will prove to be a record year for the industry in production of polished plate glass, window glass and safety glass is based upon the actual results of Libbey-Owens-Ford which Mr. Biggers reports will show about 12 per cent gain in dollar volume of total output over the previous year and double the sales volume of 1941, which was considered a normal prewar year. Relatively moderate price adjustments account for only a small portion of the overall dollar volume gain.

"Most estimates for 1949 in the automotive and building construction industries, which are large consumers of plate and window glass, foresee additional gains," Mr. Biggers said.

(Continued on page 106)



"What? Why, I can get a better price from an antique dealer!"



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, 1949



Fast-selling assortments of Durkee-Atwood Master Cord Belts complete with one or more colorful, steel wall racks.



With this 48-package assortment of 6 fastest-selling sizes in colorful enameledsteel merchandiser, DOR-TITE will be a major profit item for you.

DURKEE ATWOOD

Merchandisers

Get your radiator hose up where they do a selling job. Minimum assortment services practically all

RADIATOR HOSE

ATWOOD

Dur A cloth

Total Alvania Control of the state of the st

The miracle cloth that wipes bugs from windshields; removes rust, stain and tarnish from chrome.

For extra volume without extra sales expense, put these self-selling Durkee-Atwood Merchandisers to work for you. Dor-Tite, Dur-A-Cloth and Friction Tape Merchandisers will STOP, INTEREST and SELL customers who stop in for other items or service.

Enameled steel Fan Belt and Radiator Hose wall racks save space, are practical in design and come complete with fast-selling assortments of Durkee-Atwood quality belts and hose.

Brighten your profit picture for '49. Ask your jobber salesman about these Durkee-Atwood self-selling Merchandisers, or write direct for more information and prices. Durkee-Atwood Company, Minneapolis 13, Minnesota.

MANUFACTURERS OF 41 AUTOMOTIVE RUBBER AND CHEMICAL PRODUCTS



Extra-tacky, non-raveling, plasticized Durkee-Atwood tape in this counter merchandiser sells itself.



Business Forecast . . Continued from page 104

An Honest Dollar

Chester A. Ragland
Van Auken & Ragland

WHEN you ask for a statement about the outlook for 1949 as it affects the retail trade, I can only say that today prophets are a dime a dozen and worth about as much.

There is, however, one big obvious fact, no poll is needed to find out that more than forty million vehicles must have customer-satisfactory service; they are going to demand that work be done by trained mechanics, in modern equipped shops, owned and operated by men whose philosophy of business is an honest job for an honest dollar.

One other thing. The successful retailer must do a better job of tying in with the manufacturers advertising . . . he must do some local advertising on his own.

Basic Factors Stated By Prominent Wholesaler

T. A. Walsh, President Chanslor & Lyon Co.

WITH approximately forty million automotive vehicles operating in the United States and demand for new cars only partially satisfied, it is our opinion that at least the first six months of 1949 will be profitable for all branches of the industry. In fact, sales should continue at high levels as long as we have full employment at high wages, with a minimum of strikes and critical material shortages.

Anti-Freeze Supply Okay—With a Big If

F. C. Noble, Sales Manager
"Zerone"-"Zerex" Section
E. I. duPont de Nemours & Co.

As far as we can tell at this moment, there will be a very considerable amount of anti-freeze materials available in 1949. Perhaps not yet enough of the popular brands to satisfy the demand but sufficient anti-freeze in total to take care of the country's needs.

However, that is not the whole answer. If, because of a shortage (Continued on page 108)



That's Walt-always way ahead of times.



Tough U.S. AXLES

Each U.S. Axle is designed to do its specific job correctly and with fewer breakdowns. Because they're built tough, U.S. Axles help you keep trouble free schedules with lower maintenance costs. There's a type and size for nearly every automotive vehicle on the road. Ask your Jobber.

FREE: Latest catalog. Contains listings U.S. replacement axles for all types vehicles, including Army surplus trucks. Write.

THE U. S. AXLE CO., INC., POTTSTOWN, PA., U. S. A.



101 TOOLS ... FOR 1,001 JOBS!

A complete set of 101 approved tools in the Toolcab Workshop include Junior, Standard and Heavy Duty Sockets and Handles, ¾", ½", and ¾" Drive, and miscellaneous tools including Box and Open End Wrenches, Punches, Chisels, Screw Drivers, Tappet Wrenches, Pliers, Nylon Hammers and Stud Puller. See your Herbrand jobber for complete listing.



It's natural that a mechanic will take great pride in the ownership of these fine professional tools—and appreciate the convenience and safety of the Toolcab Workshop as a place to keep them. Having all his own Herbrand tools in his own cabinet will save time and trouble on every job.

This Workshop is mounted on easy-running ball-bearing swivel casters so that it can be conveniently moved about the shop. It has 10 drawers of various depths and sizes for grouping and quick selection of tools and precision instruments, roomy platform shelf, and removable tote tray. All drawers have spillproof stops, and precision drawers are felt lined.

Your mechanics will be proud of the streamlined beauty of your Toolcab Workshop with its chrome plated fittings and durable bright blue finish. It's of solid welded construction for permanent rigidity under severe every day use. Ask your Herbrand distributor about the Toolcab Workshop, Model MC-105CR. Send for new Herbrand Catalog No. 54-M for information about the entire Herbrand line of fine tools.

HERBRAND DIVISION THE BINGHAM-HERBRAND CORPORATION

of steel—if we cannot get the needed railroad equipment to move the product early—or, if the government should step up its requests for anti-freeze, all of our calculations would be changed. Therefore, if dealers are offered early deliveries, they would be wise to accept them.

Whether supply is long or short

of the demand, dealers should keep in mind that the anti-freeze business consists not only of the selling and installation of anti-freeze, but that a most essential part of a profitable operation is a program of cooling system preparation. Service of this type assures satisfaction to the motorist and increases the dealer's revenue.

Biggest Demand for Car Beauty Treatments

Elmer Rich, President
The Simoniz Company

VERYTHING indicates 1949 will be a banner year for those servicing motor cars. More cars on the highway, fewer garages to house them and the desire of car owners to keep their cars always looking beautiful is creating the biggest demand ever for motor car beauty treatments that protect all finishes and make and keep cars looking new. Motorists with new cars are most anxious to preserve their car's finish as long as possible and others will want their cars to look like new again. Retailers carrying Simoniz and Simoniz Kleeners; service stations and garages giving real Simoniz service will have plenty of customers.

Step Up Sales Through Service in 1949

B. M. Muchmore
Manager, Accessories Sales
A. Schrader's Son

A 50 per cent increase in the average of motor vehicles in use (1941—5½ years, 1948—8½ years) promises increased repair and replacement business for car and independent service dealers.

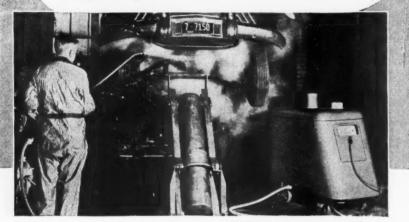
One proved method of obtaining a generous share of this increased potential is to offer a systematized inspection service at regular intervals. This service assures vehicle owners of comparatively "trouble-free" operation at a nominal flat fee, and results in increased business for the dealer when repairs or replacements are necessary.

Merchandising-minded dealers are also capitalizing on the advent of E.L.P. Tires by emphasizing the necessity for accurate tire gaging equipment. This entails the use of a master gage for weekly checking of all gaging devices, PLUS the use of a personal gage by individual motorists for checking pressures when tires are cool. Furthermore, dealers must follow R.M.A.'s recommendation to gage and compare tire pressures prior to inflating to discover any excess pressure loss—a flat tire in the making!

(Continued on page 112)

"HYPRESSURE JENNY SAVES 90% OF OUR TIME

formerly wasted cleaning by hand"



A Full-Powered, All Purpose, Heavy-Duty Hypressure Jenny is available from \$445.00 to \$575.00. JO Deluze Model shown.

We know that the above unsolicited statement by a garage owner is true because time studies, and thousands of users have proved that Hypressure Jenny cleans 10 times faster, and better, than you can clean by hand.

Hypressure Jenny steam cleaning before repairs, saves up to 40% of the time mechanics ordinarily waste wiping oil and grease from tools and equipment. Figure it out in dollars and cents, and you'll see why Hypressure Jenny will pay for itself within the first few weeks.

Besides saving you money, Hypressure Jenny will make you extra profits flushing cooling systems . . . cleaning motors and chassis . . . preparing cars for undercoating, and by performing dozens of other profitable customer services.

In addition Hypressure Jenny will keep your floors, walls, windows, lifts, grease pits, lavatories, etc., clean as a pin . . . reduce fire hazards . . . lessen your insurance risk.

MAIL TODAY Fill out this coupon for a FREE SURVEY of your cleaning require- of the SAVINGS Hypressure Jenny. Norchis	REQUEST FOR SURVEY Hypressure Jenny Division, Homestead Valve Manufacturing Co., P.O. Box 95-A , Coraopolis, Pa. We employ
HYPRESSURE, JENNY DIVISION HOMESTEAD VALVE MANUFACTURING CO. "Serving Since 1892" Coraopolis, Pa.	We paint cars, trucks, buses each month. We wash approximately cars, trucks, buses each month. We are interested in cleaning floors, walls, windows, Based on above facts, please show us the savings or extra profit Hypressure Jenny can produce. Company By

MOT



The best part of repair work is Monmo

This extra quality is typical of all Monmouth Front End Parts, such as tie rods, drag links, tie rod ends, coil springs and other independent front wheel suspension parts.

the outstanding quality of this line are Monmouth King Bolt Sets.

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1949

These bolts are first forged, then hardened and finally ground to exact dimensions after hardening to insure uniform straightness, easy time and cost saving installation. Eye comparison with king bolts produced to sell at a price will quickly demonstrate the greatly superior quality and cost saving features of Monmouth.

THE Monmouth line of front end parts is

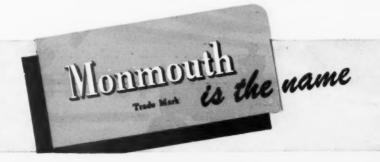
L complete for all popular makes and mod-

els of passenger cars and trucks. Illustrative of

The Monmouth parts catalog is indexed in a way that wanted parts for any car or truck can be quickly found and ordered by telephone from your nearest NAPA Jobber. His balanced stock insures the quickest possible service. Save time and money, insure customer satisfaction with Monmouth Parts. There's no part like Monmouth-the best part.

MONMOUTH PRODUCTS COMPANY, Cleveland 3, Ohio

FOR ENGINE BEARINGS CLUTCH PLATES AND PARTS CHASSIS PARTS



LOOK! 3 NEW



Introduced at the ASI Show - 3 newly designed, modern assortments join the popular Weatherhead line of merchandisers.

As always, you are assured of the highest quality of parts they contain. Precision machined from tough

The "Double F" Farm and Field Merchandiser

Specially designed for farm and ranch parts replacements, the new FF-94 Merchandiser contains a wide variety of Weatherhead Fittings.

Now valuable time can be saved by making quick, on-the-spot replacements to

repair agricultural equipment.

A sturdy, compact metal cabinet holds 4 drawers of tube fittings and 1 drawer of hose with fittings. Selection of a replacement part is made quick and easy.

Weatherhead Merchandiser FF-94

Contains 229 fittings and 10 feet of hose.

Balanced assortment of sizes and types specially selected for farm equipment use.

Attractive metal cabinet, size 11½" wide, 12" bigh, 8½" deep.



Fast Parts Replacements

on

- . Tractors
- Trucks
- Combines
- · Pumps
- Compressors
- Generators



MO

Weatherhead Merchandisers

extruded stock, Weatherhead Fittings are clean-cut to high tolerances . . . insure easy fits and long life.

They are exact duplicates of parts used as original equipment by America's automotive manufacturers.



... the Mark of Quality

2. The "Shelf-Master" Flexible Fuel Line Assortment

Metal dividers keep lines (as many as 450) filed for easy selection.

Weatherhead Merchandiser

Contains 275 lines. Fits standard steel shelving or top of counter. Size 323/4" Long, 73/4" High, 8" Deep.

The "Shelf-Master" comes with a wide variety of types and sizes of Weatherhead Fuel Lines for any make of car or truck. Weatherhead Lines are gasoline and oil-proof



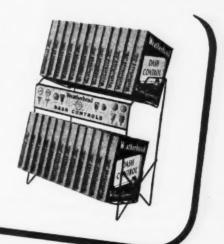
3. The "Dee Cee" Merchandiser Dash Control Assortment

Heavy gauge, welded wire construction makes this rack sturdy, yet compact enough for counter use. It contains a total of 24 dash controls in 6 different types and

colors selected to match or blend with any instrument panel. All controls are complete with conduit and wire.

Weatherhead Merchandiser D-24

Contains 24 assorted complete controls. Sturdy, light-weight metal construction. Size 141/2" long, 22" high, 11" deep.



Look Ahead with

THE Weatherhead co.

CLEVELAND 8. OHIO

PLANTS AT CLEVELAND, OHIO . ANGOLA, INDIANA . COLUMBIA CITY, INDIANA . ST. THOMAS, ONTARIO, CANADA

Business Forecast . . Continued from page 108

See Yourself As

Customers See You

Victor B. Day **Executive Vice President** Bear Manufacturing Company

A continued abundant money supply should maintain business volume at a high level. However, I think we will find customers insisting on better products and better service for their money. Shop owners and car dealers who are able to see themselves as their customers see them, and remove the bad spots, will do a larger business than ever before. Car owners are becoming more conscious of the need for wheel alinement and balancing, and since only a fraction of the country's shops are equipped, we anticipate our largest year, barring of course the outbreak of war and an accompanying cessation of civilian production.

Motor Car a Necessity In American Living

Walter F. Dunlap President & Treasurer Klau-Van Pietersom-Dunlap Associates

During the 16 years of the present national administration, the part that automobiles played in American life has changed greatly, and from a mere desired luxury, it has become a product-the possession of which is deemed necessary to family happiness.

Its purchase is the first to be considered when the necessities of life are satisfied, and the last to be dispensed with.

I can see no reason why another four years of the same national administration should in itself change this, or any other economic trend.

America is a great nation. Its citizens have had, and will continue to have, more of the good things of life than any other people on

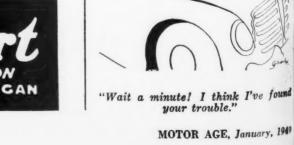
As long as the average American continues in his present attitude of mind toward life-the automotive industry is assured of more than reasonable prosperity.

(Continued on page 114)

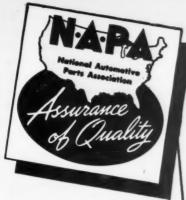


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AS ADVERTISED IN
THE SATURDAY
EVENING

POST

More than ever-

Your NAPA Jobber is a Good Man to Know!

NAPA is in The Post—in a big way—bringing to the car and truck owners of America the story of NAPA's supply service and quality standards—and what it means to them, as your customers!

Up to now, NAPA has meant to you principally a friendly, co-operative source of supply, with exceptional facilities for giving you prompt and comprehensive service on parts and supplies of assured quality.

Now the picture changes. Not only will your NAPA Jobber continue to be your best source of supply—but NAPA and the NAPA Seal will become a more powerful selling asset to you, in dealing with your

customers, and in promoting more business for your shop.

Through sustained advertising in The Post, your customers will learn to recognize the NAPA Seal, and to know what it stands for. They'll understand that when you give them parts bearing the NAPA Seal, they're getting the finest parts that money can buy.

Now, more than ever, it will pay you to concentrate all your parts purchases with your NAPA Jobber—"a good man to know" for parts and supplies for cars and trucks of all makes and ages.

NATIONAL AUTOMOTIVE PARTS ASSOCIATION - DETROIT 1, MICHIGAN



is the largest Independent Parts Organization in the Industry!

American
Brakeblok Celied united
Wisconsin
Wis

Business Forecast.

• Continued from page 112

Parts Sales Should Match 1948 Figures

Arthur G. Drefs, President McQuay-Norris Manufacturing Co.

In 1949 the automotive replacement parts industry can look forward to the biggest potential market in its history. There are upward of 41 million cars and trucks

registered. There are approximately $3\frac{1}{2}$ million tractors. All of these vehicles are being driven more miles than in past years.

Pipe lines are now substantially filled. Sales for 1949 will, therefore, be measured by consumption only rather than by consumption plus stocking.

Unless there is an important re-

cession in business, the independent replacement parts industry's sales should approximate those of 1948.

In some cases they will be better and in other cases they will be poorer. This increase or decrease will be determined by the availability of raw materials.

War or Depression Can't Lick Industry

Jack Meehan, Manager Distributors Institute

Indeed, it is my observation that current business management is over-conscious of some possible catastrophe.

Looking back over the 40 years of automotive history, the combined period of war and depression adversely affecting the automotive aftermarket adds up to a good deal less than 15 per cent of the total time. We may therefore counsel all businessmen to give 85 per cent of their attention to business unaffected by such disasters as war or depression.

Secondly, and even more important, is the repeated experience that after any period of stagnation or set-back, the subsequent level is higher than the pre-disaster level. As of right now, if we were suddenly engulfed in a severe depression or desperate war, we would not emerge at the 1940 level, but at the level of 1948 or even higher. We must not forget that there are fifteen million more people in this country than in 1940, nor can we forget that twenty-odd millions of the existing motor vehicles have reached an age where maintenance is expensive and constant.

(Continued on page 116)





MAKE MONEY WITH "PRESSURE-PURGER

Triple Action Cleaning . . .

- 1. MECHANICAL AGITATION
- 2. PRESSURE FILTERING
- 3. PRE-HEATED CHEMICAL SOLUTION

Cleans Cooling Systems in less than 30 minutes

ABOUT COOLING SYSTEM THINGS TO KNOW CLEANING EQUIPMENT

Operation

Q: Does the car motor have to be running when using the Pressure-Purger?

A: NO. Heating elements in the Pressure-Purger heat solution to necessary temperature.

Q: Does other equipment require the motor to run for a long period of time?

A: YES, and this is harmful to the motor.

Equipment-

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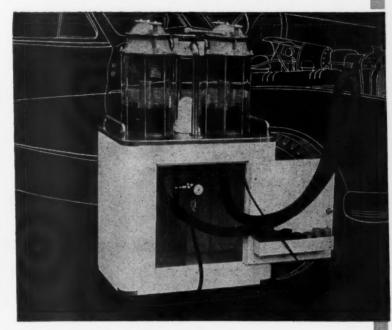
Q: Does the Pressure-Purger have any motors, pumps, or moving parts which develop service difficulties?

A: NO. There are no moving parts. Q: Does other equipment have motors, pumps, and moving parts?

Merchandising Appeal—

Q: Does Pressure-Purger show the rust, scale and foreign particles removed from the cooling system?

A: YES. There is an action which traps the sludge before the eyes.



- No moving parts—minimum maintenance.
- . Less than 30 minutes for complete set-up and Purge.
- · Easy to operate from ordinary AC-DC shop current and air compressor.
- · Visible cleansing action loosens, dissolves and filters out rust, scale, grease and grime.
- Triple-action, continuous reversing motion thoroughly cleanses Radiator and Motor Block water jackets.
- Gleaming metal cabinet offers exceptional merchandising appeal.

We Have Car Manufacturers' Approval

NATIONALLY ADVERTISED **PRICE \$295.00**



dun

MANUFACTURING

New Haven, Conn.

SALES OFFICE: 11 WEST 42 STREET, NEW YORK 18, N. Y.

the PRESSURE New York 18, N.

Business Forecast

Continued from page 114

Advertising Can Help You Win '49 Service Trade

W. A. Kirkpatrick

President, Automotive Advertisers Council Advertising Manager, Wilkening Manufacturing Co.

In 1949 there will be a lot of automobile repair business—but there will be many more repairmen trying to get it.

It will be the first really competitive year for the service business in nearly 10 years.

Competent, conscientious repair work with quality parts by experienced mechanics at fair prices will be in high demand. Such shops, where they are long established and already well known, will probably keep busy. Satisfied customers will do their advertising for them! Such shops, however, can strengthen themselves still further against increasing competition by doing a consistent job of local advertising themselves.

If you have a large shop, hire good professional advertising people. Your local association or the chamber of commerce should be able to guide you. If yours is a small shop, get some good, live-wire high school or college boy to help you. Pay him for his time and work. Get one who is on the school paper, who likes to write. Many of them can tell your story exceptionally well for newspaper ads, local radio, direct mail and also for good editorial news or publicity stories. Try it and see.

Take advantage also of the help you can get from your jobber and through him from the manufacturers of the parts and supplies you use. Frequently, the manufacturers will have excellent advertising programs designed especially for repair shop use and just waiting for you to put them to work for your business.

You SAVE...

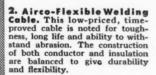
by standardizing on AIRCO ARC WELDING ACCESSORIES

... built for DURABILITY-SAFETY-WORKING EASE

Ask almost any operator what he wants in arc welding accessories . . . he'll tell you he wants maximum durability, with safety. Like, for example, these four items from Airco's complete arc welding accessory line:



1. No. 45-A Welding Helmet.
This popular helmet is strong, leak-proof, and weighs only 15 ounces without lens. It can be thrown back on head and brought forward with ease. Made of top grade black vulcanized fibre, it will not warp or lose shape.





3. Jackson Ground Clamps. These copper-forged clamps are designed for positive conductivity between the clamp and the work. The pressure actuating spring is insulated for long service with maximum tension.



4. Wire Brush. Here is the best wire brush your money can buy. Long wearing, it is ideal for cleaning deposited metal, and also for preparing parent metal for welding.

As with all Airco arc welding accessories, the above are ready for immediate shipment. For more information about Airco's complete line, write your nearest Airco Office. (In Texas: Magnolia Airco Gas Products Company. On West Coast: Air Reduction Pacific Company.)



AIR REDUCTION

Offices in Principal Cities

Headquarters for Oxygen, Acetylone and other Gases...Carbide...Gas Welding and Cutting Machines, Apparatus and Supplies...Arc Welders, Electrodes and Supplies

People Are Demanding Service at Fair Prices

B. W. Ruark, General Manager Motor and Equipment Wholesalers Assn.

The weight of informed opinion is that business will continue dur(Continued on page 118)



"This model's made to order for the wife—it's already hit a tree!"

IVERTIMING FOR ARC WILDING

MANAGE

DELCO

| Countries | Countries

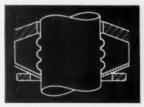
All shock absorbers with sealed construction keep dirt and foreign particles from getting in.

Delco has gone a step farther. The new Delco self-cleaning compression valve and the Delco "Multi-Lip" seal keep engineered riding qualities from getting out.

There's no change in riding comfort through clogging of the valve orifice . . . no change in riding comfort through fluid leakage within this direct action shock absorber.

That's why the Delco Sealed-In Ride Control is a precision instrument that maintains engineered riding qualities throughout the life of the unit.

Build your shock absorber business on satisfaction with the new Delco Sealed-In Ride Control. Delco Products Division, General Motors Corporation, Dayton, Ohio.



MULTI-LIP SEAL

Prevents leakage to help maintain uniform ride control.



NEW VALVE DESIGN

Prevents clogging of orifice through self-cleaning action.

DELCO SHOCK ABSORBERS
A UNITED MOTORS LINE
Available Everywhere Through

UNITED MOTORS DISTRIBUTORS



DELCO Hydraulic Shock Absorbers

Kept Busy on Maintenance C. F. Wright Ballou & Wright

Service Dealers Will Be

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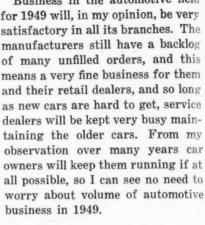
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ing 1949 at about the level of 1948. Government expenditures will run at least 35 billion dollars and probably more. Needs of private buyers for durable and consumable goods are far from filled. Witness the shortages in housing, automobile and other fields. Government will continue its "easy money" policy. Demand plus ability to buy insures a continuing great overall business volume. With filling of war-created demand for new cars still one to two vears away, demand for maintenance of present cars will continue great. But people are demanding good service at fair prices more and more. The automotive retailer who realizes that and acts accordingly will "cash in" in 1949.

Business in the automotive field dealers will be kept very busy maintaining the older cars. From my



If We Work For It **Business Will Be Good**

Fred S. Roberts Phelps-Roberts Corp.

I have been in this aftermarket parts business for 25 years-business has never been other than "good." We have more competition than ever before but at the same time our potential market is far greater than ever. If we work, as we learned how some years ago, our business will continue to be good. The wholesaler who doesn't live closely to his business can slip-and how! I'm foolish enough to firmly believe it's the best business in the world

Outlook Favorable in **Auto Hoist Industry**

Harry D. Smith Vice-President & Dir. of Sales Globe Hoist Co.

In our opinion the business outlook for 1949 automobile passenger car, bus and truck hoist industry, is favorable.

Mechanization of auto, bus and truck repair work by elevation of the vehicle on the hoist is an accepted reality. With fair business conditions such an acceptance can mean a good business in 1949. One problem of manufacturers in 1949 is going to be the meeting of delivery schedules when basic steel used in manufacture is being or may be diverted by allocation under government sponsorship.



Business is There—For Those Who Go After It

George L. Briggs

Vice President and Treasurer Behel and Waldie and Briggs, Inc.

Twelve of the clients of this agency whose sales are all or mostly in the automotive industry have approved advertising budgets for 1949 totaling 50 per cent in excess of 1948 expenditures. Eight of the 12 will spend more. Four will spend the same as is 1948. None will spend less. This seems to us to be conclusive evidence that these leading producers expect the business to be there. They are going after it more aggressively than ever. Perhaps that is the lesson for the industry's retail service outlets. The business is there—for those who go after it!

Aggressive Merchandising Important for Dealers

John C. Hines

General Sales Manager, AC Spark Plug Company

Spark plugs, oil filters and fuel pumps, our major lines, will be supported in 1949 by increased advertising and sales promotion to the consumer.

Steadily increasing new vehicle registration, coupled with the market afforded through keeping older vehicles in good operating condition, if aggressively merchandised by the retailer organizations, should provide an important increase on all of our lines in 1949.

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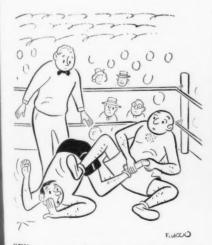
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1949

(Continued on page 120)



"I'll groan louder if you'll twist it the other way!"

18,000 NEW Rankin Dealers in 2 YEARS!

...the most Amazing Dealer Profit Testimonial in Seat Cover History

YOU CAN HARDLY BELIEVE IT. BUT THERE IT IS!

In 1947

9,000 new dealers switched to Rankin Seat Covers.

TODAY

18,000 new dealers have switched to Rankin Seat Covers.

More dealers . .

now sell Rankin covers than any other brand in the world. Why? Because the Rankin Plan has revolutionized seat cover profits for the dealer. It gives you customtailored covers that sell for the same price as non-fitted covers—at a HANDSOME profit to you. Protects you against mail order and cut-price competition. Gives you the most beautiful deluxe line of covers in America today—yet at POPULAR PRICES. Profits! Volume! EVERYTHING!



If you haven't seen this amazing Rankin Plan, and the terrific profits if can make you, mail the coupon below. Do it TODAY, and get set for bigger '49 volume.



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RANKIN MANUFACTURING COMPANY · Cedar Falls, la. · Wichita Falls, Tex.



IN BRAKE SERVICE, TOO

Here's a service that means an extra measure of safety for your customer and an extra sale and profit for you.

The need for flushing out the old, gummy, dangerously dirty brake fluid is as understandable to your customer as is the need for a crankcase draining. Puritan Hydraulic Brake Flushing Fluid does a thorough, efficient job and does it quickly and easily.

Then a refill with longlasting, non-gumming Puritan Hydraulic Brake Fluid gives your customer a responsive brake pedal and eliminates possibility of brake failure due to overworked, sluggish brake

These two Puritan quality products enable you to give superior service, to "trade up" your customer to a big-ger sale and to net more profit for you. Be sure you have a supply of these Puritan products available at all times. Get a supply from your N.A.P.A. jobber today.

FLUSH AND FILL FOR BRAKE SAFETY



1. Clean hydraulic brake line with fast-acting Puritan Hydraulic Brake Flushing Fluid.



2. Refill with non-gum ming, all-"miscible"
Puritan Hydraulic Brake

HESTER 6, NEW YORK

MYBRAULIC BRAKE FLUID AND FLUSHING FLUID . GASKA-SEAL NO. 1, 2 AND SHOCK AND KNEE-ACTION OIL

Business Forecast

Continued from page 119

Service Dealer Should Meet Changing Trends

J. L. Wiggins, Exec. Vice-President National Standard Parts Assn.

The year 1949 should prove one of the most prosperous for the automotive service dealer if he will adjust himself to the changing trend of the industry by rendering as good or better service than that of his competitors. As to the market, there are about 40 million vehicles in operation and of these the average age is about eight years. This means that there will be constant demand for service, maintenance and repair parts, due to the public depending upon motor transportation as the means of providing human sustenance, work and pleasure. But only those who take an interest in their customers profit from customers' interests.

Induce Owners To Continue to Buy

R. A. Picard, President Picard Advertising Co.

During the scarcity, car owners would buy practically anything they felt might increase the life of the vehicle and, of course, this was also reflected in sales of tools and equipment. Some consumer products had the added features of luxury and comfort as well as utility. As new cars and trucks become more and more plentiful and the average life per owner shortens, the big goal is to induce these owners to continue to buy the accessories and services which they heretofore treated as necessities.

(Continued on page 122)



"Let's put the top down!"

MOTOR AGE, January, 1949

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VISUALINER

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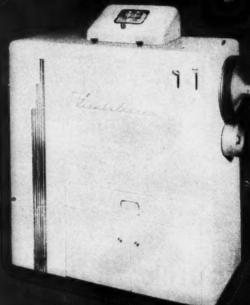
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1949

Hit of the Show in "47" --- Now a "BEST SELLER"

WSUBALANCER



HIT OF THE SHOW IN "48"

The new John Bean Visubalancer will be a hit in your shop, too, because it offers as great an improvement in wheel balancing as the Visualiner does in wheel aligning.

Simple and foolproof in operation, the Visubalancer tells exactly how much weight to use and exactly where to place it. Balances in a matter of minutes—optical light ray principle insures utmost accuracy. Sturdy, attractive—and a profit maker.

Ask your Jobber now for full details on the new Visubalancerdeliveries will begin about February 15

DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

LANSING 4, MICHIGAN



WHEEL ALIGNERS AND CORRECTION TOOLS . WHEEL BALANCERS AND BALANCING TOOLS • WEIGHTS • CAR WASHERS • HEADLIGHT TESTERS

Business Forecast . . Continued from page 120

Slight Increase on Replacement Items Seen

> James T. Birch Vice-President in Charge of Sales The Crescent Co., Inc.

The outlook for 1949, as it may affect the automotive retailer and the independent service dealer, seems to indicate there will be a slight increase over 1948 on replacement items and most stable supplies. It seems as though the car dealer-not the car distributorwill experience some decline on supplies particularly.

We expect to supply at least 10 to 15 per cent more merchandise to the dealer trade in 1949 than in 1948, through the automotive wholesaler, since nearly all our manufactured products are replacement items, which have kept step with the demands for modern improvements in every way, including raw materials and product appearance

Recalls Six Golden Words for Good Business

George W. Stout, President George W. Stout, Inc.

There are many good reasons to believe that there will be in excess of 42,000,000 cars, trucks, tractors and buses registered in the United States at the end of this year. This fact alone almost guarantees a tremendous service business for automotive retailers in 1949. Yes, business WILL BE GOOD. There's the little old law of compensation though, which should be considered. It reads "For every good, there is a bad," so maybe this year is not too early to remember the six fundamentals of business success, especially in the field of serving the vehicle owner. Dusted off and shiny bright, the fundamental golden success words are-Service, Courtesy, Fair Charges, Quality, Accuracy and Dependability.



QUICK TURNOVER!

Stocks that gather dust don't gather profits. A sure springboard to fast turnover is a complete stock of Schrader Products-particularly the New Display Packages of Caps, Cores and Gauges. Set up your Displays of the Schrader Products where they will be seen . . . and you'll make many extra sales - extra profits! Schrader advertising in National Consumer, and Farm publications tells vehicle owners to "look for and buy from these Schrader Displays at your dealers." Tie in with this timely advertising for quicker turnover-order from your regular supplier today.

Sell a Schrader Gauge to Every Vehicle Owner

The Complete Line—ONE SOURCE ONE RESPONSIBILITY

Tire Valves, Valve Caps, Valve Cores, Tire Pressure Gauges, Chuck Gauges, Couplers, Blow Guns, Air Chucks, Vulcanizers, Service Tools, Hose Fittings, Spark Plug Pumps, Accessories.



Marketing and Merchandising Are Inescapable in 1949

Albert H. Eichholz, Gen. Manager Motor & Equipment Manufacturers Association

There were approximately 40,-500,000 vehicles on our highways at (Continued on page 124)



"Mighty smooth clutch."

M



Signs THAT GUIDE Service Traffic

BENDIX PRODUCTS . . .

A complete family-line of soundly engineered products . . . each a longestablished leader in its field . . . backed by a company that stands out for creative engineering and quality manufacturing . . . these Bendix signs stand for good business and for good business relations between factory, dealer, and customer.

SERVICE SALES DEPARTMENT
BENDIX PRODUCTS DIVISION of
SOUTH BEND 20, INDIANA



Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, New York

the close of 1948. That means a 3.-200,000 jump over 1947 registrations. With 29,000,000 vehicles prewar models that are seven or more years old, the industry faces a new high in replacement parts, accessories, shop equipment, service tools and chemical business.

In 1948 only 1,400,000 vehicles appear to have been junked. Usually two to two and a half million vehicles hit the junkie, or did when cars and trucks were younger.

The situation can mean naught but continued good business for manufacturers, wholesalers, retailers, car dealers, the independent service trade and other distribution channels.

But such prospects attract com-

petition, and competition is sure to become increasingly keener. Gradually supply will be leveling off with demand. That transition may take a couple of more years—but it is definitely in that direction.

The inescapable result must be better planning, marketing, merchandising and selling-as contrasted with a prolonged period of easy order-taking.

With Manpower Shortages Best Equipment Needed

L. F. Woolman, Executive Manager Equipment & Tool Institute

In 1949 there will be a larger number of automotive vehicles in use than ever before, and while the average age may be slightly less than in recent years, due to new production since the war, it is virtually certain that the service requirements and the volume of business done will surpass all previous records

It is anticipated that less service manpower will be available in 1949. which indicates that all types of automotive service establishments will need the most modern labor saving equipment and tools procurable.

There is no reason to believe that the habits of vehicle owners will change, and it is to be expected that there will be a continuation of "the best equipped shops getting the business."



This remarkable new Walker Contact Battery Cable is an engineering achievement that brings important new advantages in delivering power!

A striking metallic blue color distinguishes these cables ... a blue finish that is eyeappealing and proves highly resistant to acid fumes, heat, cold, and oil.

The prime feature is that the **Control** Cable delivers full power . . . overcomes the old resistance factors of ordinary cable terminals.

MORE POWER: This new cable makes direct contact, eliminates resistance at the battery post.

STRONGER: Copper strands, soldering materials, and terminal are all formed into a single unit by highpressure soldering.

LONGER LIFE: The terminal is extra heavy red brass; resists corrosion; repels acid fumes.

> WALKER BROTHERS Conshohocken, Pa.

firm junction of the copper

conductor to the battery

SPARK PLUG CABLE SETS

AUTOMOTIVE CABLE ON SPOOLS TERMINAL AND CABLE PARTS



"Never mind where I got him—just cook him!"



HULBERT'S Smash-Proof

CREEPERS

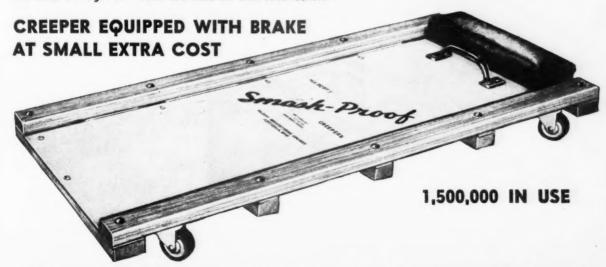
GUARANTEED!

AMERICA'S LEADING BRAND FOR OVER FIFTEEN YEARS

GUARANTEE: Both the Model No. 18 and 21 Smash-Proof creepers are unconditionally guaranteed not to smash within one year from date of purchase with the exception of casters and headrest leather. Broken parts will be replaced free of charge by your jobber.

NOTE THESE FEATURES

- For comfort and convenience Smash-Proof tops them all. Solid wooden body protects from damp floors. It is impossible to tip them over because of patented offset construction; note the shims between the rails and cross-pieces. This feature also gives the operator one-fourth inch more clearance while working under cars. Rails are located just right to facilitate easy side-to-side movement. Light weight, perfect balance and convenient pickup handle make the work easier.
- The body-board is the backbone of a creeper. To secure maximum strength with minimum weight we use a special construction not to be compared with ordinary plywood. This and the high grade casters furnished assure you of a superior value even without other considerations.
- Smash-Proof creepers many years old can be quickly and cheaply rebuilt like new at small cost as parts are interchangeable and may be obtained from any Smash-Proof jobber.
- Other quality features include a long headrest upholstered like a fine piece of furniture with rubberized curled hair padding and gimp binding securely fastened to a hardwood block covered with high grade artificial leather. Wood is sealed with two coats of spar varnish and is easy to keep clean. Screws and bolts are used throughout. Bolts are held on with lockwashers.



CARRIED IN STOCK BY 4,000 LEADING AUTOMOTIVE JOBBERS

HULBERT MANUFACTURING CO. • Ashtabula, Ohio

just

Profit Opportunities . Continued from page 82

For Further Information Use Coupon on Page 82

76

The Tokheim Oil Tank & Pump Company, Fort Wayne, Indiana, is marketing the Lo-Boy pump, featuring a new type of hose retracting device. The principal working part of the device is a nylon covered cable of monel metal operating on a pulley-weight mechanism. A cable is attached to the midpoint of the hose. The weight inside the pump housing travels up or down on steel guides as the hose is

extended or retrieved. After servicing, the hose is drawn back into position alongside the pump.

77

The Lisle Corporation, Clarinda, Iowa, has just announced its two new sizes of ring compressors. One is the No. 6 with a range of 3-11/16 inches to 4 inches and No. 7 with a range of 4 inches to 4¼ inches. These sizes supplement the previously announced



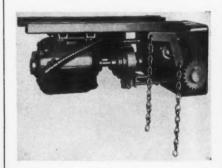
3 inch to 3-11/16 inch compressors. Several advantages are claimed for the new tool. After the compressor is adjusted for the first piston, it can be used for the entire set without opening and resetting, and each piston is easily started through the large end of the funnel with the aid of a finger grip on the side of the compressor.

78

Executone, Inc., New York City, New York, has recently announced a new self-contained signal light system, consisting of an illuminated display panel and a selector switch unit. Built for up to 12 or 16 departmentalized operations, the panel board displays the names of the Service Department's individual shops. Next to each are three colored signal lights which indicate the activity in each department. The signal light system is controlled by the service manager so that when a customer drives in, the service salesman immediately sees which departments are busy or open.

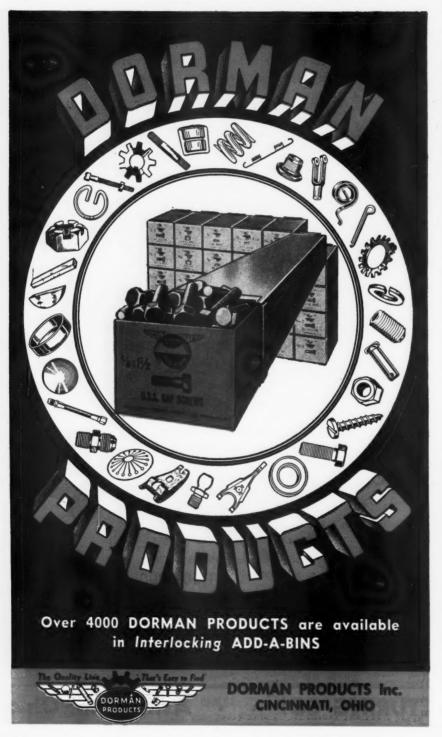
79

The Barber-Colman Company, Rockford, Illinois, manufacturers of the Barcol Overhead door, announces the redesigned Model MC Electric Operator for sliding, overhead and steel



rolling doors. It is stated that operating efficiency has been increased and that standard installation has been facilitated by the modification. The new operator uses a gear assembly designed so that the driving sprocket is interchangeable to either side. A new type limit-relay has been incorported which contains both the opening and closing relays and a screw type limit switch.

(Continued on page 128)





THE GREATEST

LABOR-AIDING, TIME-SAVING ELECTRIC TOOL EVER OFFERED

SAVES UP TO 90% OF THE TIME ON NUT RUNNING OPERATIONS ALONE. SIZE 4U-3%" BOLT CAPACITY. SIZE 8U-3%" BOLT CAPACITY



"Rotary Impacts" up to 1900 per minute—do the work and give you a tool with a more powerful turning effect than any other electric tool of comparable size.

- It affords amazing savings on all operations—nut running as much as 90%.
- It uses standard attachments to perform all the operations shown—it gives full power in either direction.
- It eliminates all kick or twist even on the toughest jobs.
- It eliminates motor burn-outs because the motor continues to run even if you stall the spindle completely.

An I-R IMPACTOOL pays for itself in 30 days with normal use.

It's hard to believe until you see it in action, so—Call your Ingersoll-Rand distributor and ask for a demonstration of the amazing new electric Impactool—or write to Dept. IT, 11 Broadway, New York 4, N. Y. for descriptive literature.

Sold Nationally through distributors and jobbers.

Ingersoll-Rand

Drills -- Reams -- Taps -- Runs Nuts -- Drives Screws -- Runs Hole Saw -- Bores Wood -- Drives Studs -- Drills Masonry -- Extracts Broken Studs -- Runs Wire Brush

MOTOR AGE, January, 1949

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Profit Opportunities . Continued from page 126

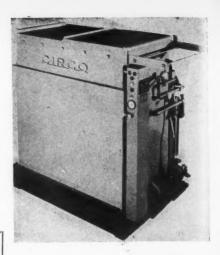
For Further Information Use Coupon on Page 82

80

The New England Auto Products Corporation, Pottstown, Pa., has made an addition to their line of universal joints and parts, with the cross pin tool. This tool is designed to remove and install the cross pin in ball and roller type universal joints. The tool features automatic centering of the pin, which is said to eliminate any harmful vibration resulting from an off center installation. The small

diameter of the tool is used to press out the old pin. To install, the new pin is inserted in the socketed end of the tool and pressed into place. When the tool bottoms on the ball head, the pin is automatically centered.

The Circo Products Company, of Cleveland Ohio, announces their automatic push-button controlled vapor degreasers in which all surfaces ex-



posed to solvent vapors are protected by stainless steel. Other features of these degreasers include a built-in solvent reservoir tank, a leak-proof clean-out door, indicator light and temperature gauge to show operating condition of degreaser, and elimination of moving parts.

The Kool Block System, Inc., Columbus, Ohio, have developed a machine for cleaning radiators and blocks on a car without removing any parts. Called the Kool Block System, it is said to be able to clean a cooling system in 2½ hours. The manufacsystem in 272 hours. The manufacturer states that no claims are made to dissolve rust, lime, and scale, but that this system does break down the binder formed along the walls of the water jackets and dissolve the congealing properties in this sediment, then flushing out the entire system. This machine can be furnished in either a stationary model capable of cleaning four cars at one time, or a portable model that can be mounted on a truck or trailer. The capacity of the latter unit is two cars.

(Continued on page 132)



Molded to Fit the Center Hump of Any Car



DISPLAY CARTON HOLDS 6 MINUTEMAT BOXES

very attractive self-service display roon holds 6 Minutemat boxes. Back up is a printed cut-out display card th place for price insert. Simply open roon, insert price and place on dis-uy. The rest is easy. Attracts, Stops d Selis.

★INSTALLED IN A JIFFY. Fits any car front and rear. No fitting necessary. Just trim ends to desired size. Stays in position. * PROTECTS EXPENSIVE CARPETING against dirt, grease and wear. To clean, simply remove Minutemat, shake out and replace in position.

* SELLS ON SIGHT. Every car owner a prospect. Instant appeal results in fast turnover, quick profits.

* AVAILABLE IN BLACK OR TAUPE. TWO USED PER CAR.

DISPLAY MERCHANDISER For Floor Mats and Pedal Pads Holds 18 floor mats. 36 pairs pedal pads. 19 accelerater pedals. Rolls Doan MANUFACTURING CORP an wheels. CLEVELAND 12, OHIO



"The pants will be a little tight around the shoulders for a while, but you'll get used to them."



REFINISHING MATERIALS





The world's finest automotive refinishing materials . . . as convenient as your telephone absolutely everything you need for your body refinishing department . . . LACQUERS

. ENAMELS . PRIMER SURFACERS . THINNERS . RUBBING COMPOUNDS . INFRA RED BAKING OVEN UNITS . X-ACT MATCH COLOR KITS . . . call your local Briggs Distributor or Briggs Manufacturing Company, Detroit 11, Mich.



THE SARAN STORY WILL REACH 35 MILLION READERS THIS SPRING



ADVERTISING CAMPAIGN WORK FOR YOU...

BE READY WITH SEAT COVERS OF SARAN!

BY NATIONAL

Here's another big reason dealers everywhere are pushing seat covers of saran! From coast to coast seat cover customers will be stimulated by full color saran advertisements in The Saturday Evening Post, Life, Time and Fortune! They'll be wide open prospects for seat covers of saran.

Here is a new and wonderful seat cover sales story. Brilliant color that stays bright because it's built right into the filament . . . unprecedented durability that reckons with rugged wear . . . smooth, snug fit that stays smooth . . . carefree beauty that resists moisture, dirt, stains and scuffing. Everywhere, seat covers of saran are setting new sales records and assuring customer enthusiasm.

Stock seat covers and seat covering of saran—give them preferential display—profit from this big national advertising campaign. And be sure to see your distributor for hard-hitting point-of-purchase material.



Saran by National

THE NATIONAL PLASTIC PRODUCTS COMPANY
ODENTON, MARYLAND

New York: Empire State Building . Los Angeles: Bankers Building

Profit Opportunities . Continued from page 128

For Further Information Use Coupon on Page 82

The McCaskey Register Company, Alliance, Ohio, now offers its 1949 model McCaskey cash register system, model ER7 and ER9. The model ER7 is the one total register used most frequently in the shop. It enables him to have a capacity of \$999.99 or \$9,999.99 in registering capacity. Thus the car dealer is permitted to register every transaction which takes place, regardless of the amount of money involved, in a single transaction. The

model ER9 is used in the service station field or in businesses doing a large gasoline and oil volume.

The Lonn Manufacturing Company, Inc., Indianapolis, Indiana, is marketing its Lonn water saver washing hoses. These nozzles fit on the end of the standard garden type hoses, and can be turned on by merely exerting pressure on the end of the hose, as if to bend it. An internal trigger is a

positive control of water flow. advantages claimed for this product are that it gives increased pressure to the water without increasing amount of water consumed. amount of water consumed. The amount of water pressure in volume is controlled by the amount of pressure on the nozzle. Among other products manufactured by the Lonn Company are the Lonn "Alspray," a cleaning spray gun, and the Lonn Air Saver for blowing out ignition parts, etc.

The Hunter Engineering Company, St. Louis, Mo., has developed a port-able, on-the-car wheel balancer, the Hunter Tune-In.

Basis of the new unit is the Tune-In, a disk-like unit containing the balancing and weight detection equipment that is attached to the wheel rim with the wheel still on the car. Second part of the balancer is the

wheel-mounted combination carrying



section that incorporates the spinner and compartments for the carrying and selection of tools, accessories and balance weights.

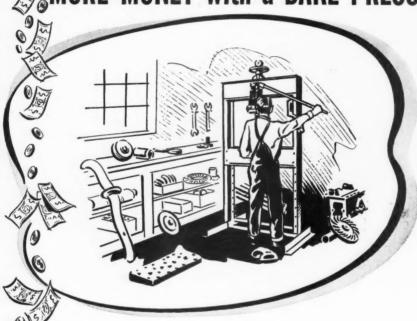
To operate the balancer, the Tune-In unit is attached to the rim, the wheel is set in motion with the spinwheel is set in motion with the spinner and through adjustment of a set of knobs on the Tune-In, the heavy section of the wheel is located. After this is detected, a second adjustment determines the amount of effective weight that is needed to remove all vibration and balance the wheel. With both adjustments complete a gage both adjustments complete, a gage built on the unit indicates the size and weight required and the spot to apply it.

The Power Brake Parts Manufacturing Company, Detroit, Michigan, has placed on the market the Robin-Automatic Dual Air Valve, a device which is designed to prevent the loss of air in case the brake air line on a truck or tractor is torn off through accident. In the event of the air connecting hose breaking away, the Dual Air Valve automatically shuts off the escape of air. The valve, which is provided with a dash control, also enables the driver to put the trailer's emergency brake in operation should the tractor brake for any reason fail. The manufacturer states that the valve has only one moving part, and can be installed with an ordinary wrench, as its installation involves only removing the standard shut-off valve which is on the back of the cam, screwing the dual air valve in its place, and making the connection to the control on the dash.

(Continued on page 136)

13

How to make MORE MONEY with a DAKE PRESS



Do more kinds of jobs . . . at greater profit

Any mechanic with a set of wrenches can do most small repair jobs, but only a well-equipped shop can make the real money. A Dake press in your shop allows ring-gear riveting, gear replacement, and gen-

eral pressing and straightening jobs that you would otherwise pass up.

You can do these profitable jobs if you have a Dake press. Mail the coupon, today, for a free copy of the Dake Press Catalog.



Dake Engine 626 Seventh	St., Grand	Haven, I	dich.	
Please me Dake Arbor	pil me a Press Cate	copy of alog.	the	latest
Name				
Company				
Address				
City				

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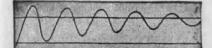
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1949

This message is appearing in current Fleet Publications to produce profit for you.

When a Man is "All In"

He Can't Go All Out for You



STANDARD TRUCK CUSHIONS - Poor take-up of shock followed by rough rebounds. Drivers take up to 50,000 shocks like this a day.



BOSTROM HYDRAULIC SEAT-Soaks up the initial shock and levels out-like à passenger car ride.



THESE ENGINEERING RIDE-GRAPHS

tell you better than words why . . . Safety slips! Schedules lag!

Equipment and cargoes take abuse!

Yes... Bostrom hydraulic seats more than pay for themselves by reducing driver fatigue. You get additional savings by cutting seat repair bills. Ask your dealer for a demonstration. For free folder, "12 Eye Openers Concerning Truck Seats" write:

BUSTROM MFG. COMPANY 133 West Oregon Street • Milwaukee 4, Wisconsin

MOTOR AGE, January, 1949



There is NO Substitute for a Bostrom Ride! . **Bostrom Hydraulic Seats**

now standard or optional equipment on the following trucks: GMC, Diamond T, Federal, Hendrickson, Peterbuilt Walter, Ward La France, FWD, Dart, Oshkosh, and Coleman. Specify Bostrom Model 47 Seats on your new trucks.

Look to Ausco

for bigger profits through IMPROVED service operations

In the interest of more efficient car and truck servicing, the AUSCO 1949 line of hydraulic and mechanical jacks embodies many important advancements.

Typical of Ausco progress are the new Ausco Hydraulic Curb and Floor Jacks. The new low position of the handle socket on these jacks (27%"from floor) gives you greater stroke under late model low-slung cars.

For safety, these improved jacks have a strong, malleable iron lifting arm and a positive safety release to prevent overload. For maneuverability, they have an extra-wide chassis and a positive-grip, self-leveling saddle. Every inch of these new Ausco Jacks is designed to put you in a position to make more money through faster, better servicing.

See your Jobber today or write us for further details. Address Dept. MA-1.

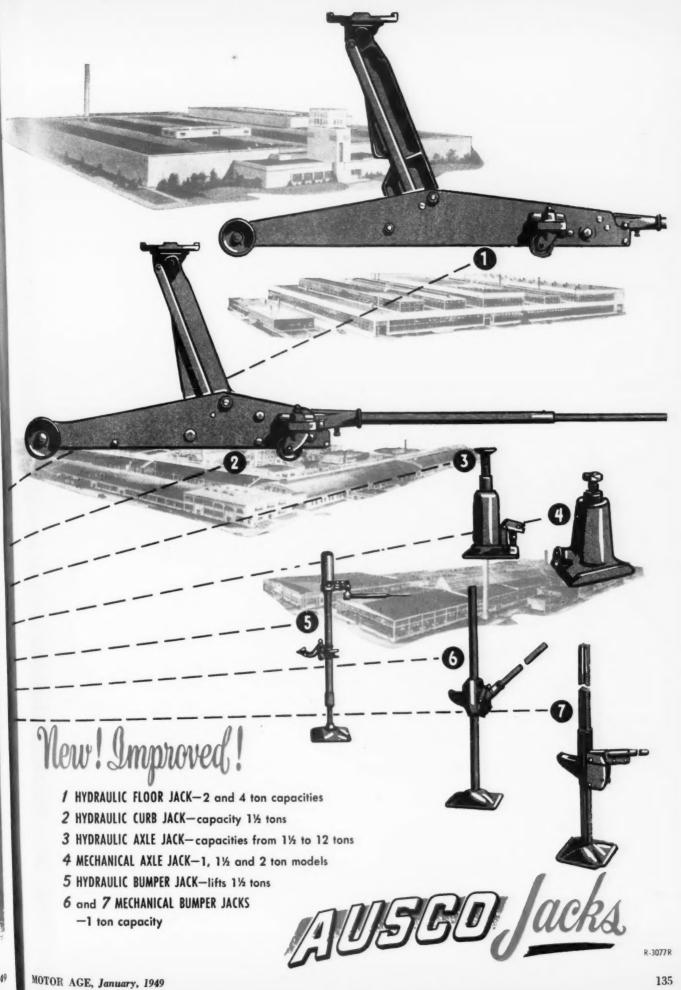




AUTO SPECIALTIES MFG. CO.

St. Joseph, Benton Harbor, and Hartford, Michigan; Windsor, Ontario, Canada

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Profit Opportunities . Continued from page 132

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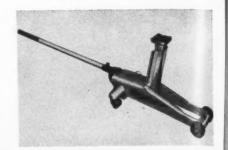
87

The Rotary Lift Company, Memphis, Tennessee, has announced its Model 27-SL two-post Shop Lift. The manufacturer states that in designing this lift it concentrated on attacking the problem of expensive installation cost for this type of equipment. It prefabricates and furnishes complete concrete forms which serve as permanent steel lined superstructure housings after the lift is installed. To

permit adjustment of rear axle supports prior to positioning of the car on the lift, the 2¼ inch slots in the rear housing are not provided with covers. Wheel base calibrations on the side angles of the rear housing are said to make faster loading possible.

88

The Manley Manufacturing Company, York, Pennsylvania, is introducing three new pieces of equipment to the field. The first of these, the WC-8 is designed to handle all types of wrecking jobs up to 8 tons capacity. This crane features double swinging booms, separate winch units, booms



which swing as a complete unit, and controls on both sides of the wrecker. The booms can be used singly or together because they are separate individual mechanisms and controls. The second new product is the JS-2 Two Ton Hydraulic Jack. This jack, which has a one piece steel frame, a removable handle, ball bearing swivel casters, and a swiver rest plate, has a low height of 4 in. and a maximum height of 20 in. The total weight is 93 lbs. The third unit currently being featured by Manley is the 86-A Two Ton Trestle with I-Beam construction. This trestle is designed for lifting motors, hoisting ends of cars, removing bodies, etc. It has a clearance of 7 feet 6 inches.

89

The H. B. Egan Manufacturing Company, Muskogee, Okla., is marketing the one-piece Jiffy Clamp designed for handling all types of rubber vul-



canizing patches and valve stem replacements. The Jiffy Clamp is designed in such a way that pressure can be applied regardless of the angle of the patch. Feather-edging is accomplished in such a manner that the sidewall of the metal pan is not broken or bent. The clamp is constructed of aluminum alloy.

90

The Quality Tools Corporation, New Wilmington, Pennsylvania, has announced its new display line for jobbers which is offered in ten or eleven units for counter and wall display purposes. The manufacturer also states that the regular automotive type tools are all described in the latest catalogue.

(Continued on page 138)





Safety for your customers-Profits for you

Selling "Safety" is always good business. WEED has been helping you to promote safety for years by advocating the use of tire chains. This year it's the new WEED AMERICAN V BARREINFORCED TIRE CHAIN—with user advantages as shown in the advertisement above. Remember that WEED offers you the 3-WAY PROFIT PLAN:

SALES—Every sale of WEED AMERICAN V BARS means a satisfied customer as well as a profit.

2. SERVICE—Greatly simplified by the new WEED Zip-On Tire Chain Appliers. And Tire Chain service is good business—especially when you sell the appliers.

3. REPAIRS—With WEED Chain repair tools, chain repair is quick and easy—therefore profitable.

York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.



In Business for Your Safety

MOTOR AGE, January, 1949

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Profit Opportunities . Continued from page 136

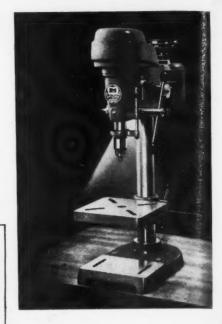
For Further Information Use Coupon on Page 82

91

The Glidden Company, North Bergen, New Jersey, is featuring three products for automotive use. These include the new Glidden Tarnish and Rust Preventer, for preventing rust and tarnishing and for putting a shine on chrome and all metal surfaces; Glidden Motorkotor, a quick-drying body enamel, which is made in white, black, and 14 popular colors; and Century Wipe-On Auto Enamel, which is applied with a powder puff or cloth.

92

The South Bend Lathe Works, South Bend, Indiana, has announced production of its 14-in. Drill Press. This Drill Press, which has a one-piece head casting, is said to insure permanent precision alignment of the spindle. The manufacturer states that the head can be adjusted to any position on the column, can be inverted, and can be used either above or below table. This unit has a built-in light, which is designed to provide shielded, shadowless



lilumination over the work area. This Drill Press has a maximum drill size of ½-in., and the motor size recommended is 1/3 or ½ H.P.

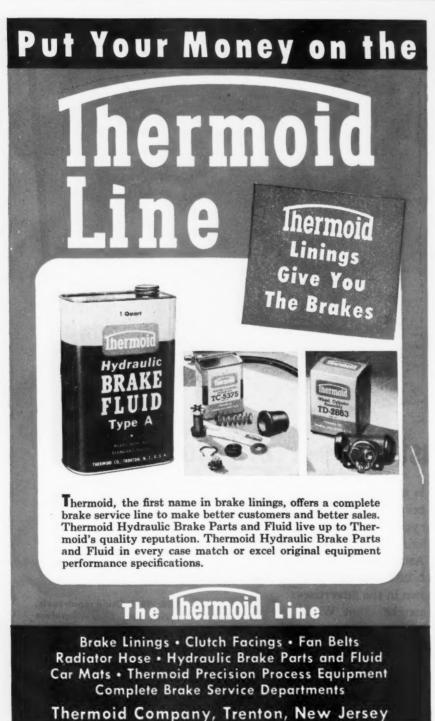
93

The K. C. Fountain Brush Company, Kansas City, Missouri, is marketing a variety of types of fountain brushes, which rinse as they wash. The manufacturer states that the constant flow of water through the pliant bristles softens the dirt so that the brush removes it easily. These brushes are said to speed up all washing jobs and are suitable for use in automotive washing. The entire brush assembly is made of non-rust material, and the bristles are hand drawn with rust proof wire. All models come with scratch proof rubber bumpers. These brushes hook up to any standard garden hose outlet.

(Continued on page 140)



"You don't know me and I don't know you, but we both know it's raining!"





This size

> Truck. Other products of Ramsey Corporation, 3718 Forest Park Blvd., St. Louis 8, Missouri: RAMCO Piston Skirt Stabilizers · · · Seal-Tite Piston Rings · · · Oil-Tyte Piston Rings · · · Spirolox Retaining Rings, Spiro-Seal Grease Seals & Dust Seals · · · Famous RAMCOnizer Machine for reshaping collapsed piston skirts · · · Ramco 3-Up Paris Cleaner, Factories: St. Louis and Sullivan, Missouri; Fruitport, Michigan; Toronto 8, Ontario, Canada. Copyright 1949 by Ramsey Corporation. R-3125.

Profit Opportunities . Continued from page 138

For Further Information Use Coupon on Page 82

94

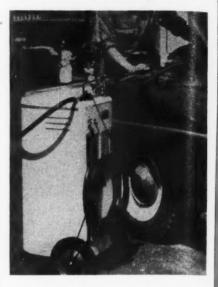
Service Station Equipment Company, Muskegon, Michigan, announces a complete line of Eco automatic Tireflators, air-operated machines for automatically inflating tires to predetermined pressure. Eco Tireflators are universal in application and are designed to handle all automotive tire sizes and will operate on minimum air pressure. The manufacturer states that a booklet containing details on

Eco Automatic Tireflators has been printed and is available through Eco Franchise Jobbers or by request to the company.

95

The Graymills Corporation, Evanston, Ill., has developed a mechanized oil changer which does not require lifting the car to remove the plug. The unit consists of a steel cabinet on rubbers, with an electrically driven gear

type pump. A bayonet type nozzle is inserted into the crankcase through the dip-stick hole and the switch is engaged. The old oil is sucked up

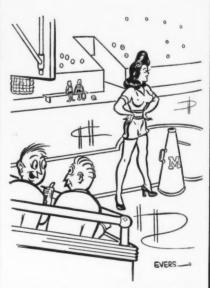


through the tube and into a transparent reservoir where the customer and attendant can see and measure the exact amount withdrawn. A sixgallon sump is built into the cabinet and is emptied electrically. The manufacturer states that the oil can be changed in as little as 90 seconds.

96

Lyon Metal Products, Inc., Aurora, Illinois, is marketing Lyon Steel-Wood Shelving. This shelving, with steel framework and hard wood shelves, is said to offer the following advantages: adjustability, so that each shelf can be adjusted independently of the other; no bracing required, which means that this shelving is self-supporting and simplified set up which is said to make it possible to dismantle or rearrange with only a hammer and screwdriver. The construction of this new shelving makes it suitable for automotive parts stocking.

(Continued on page 144)



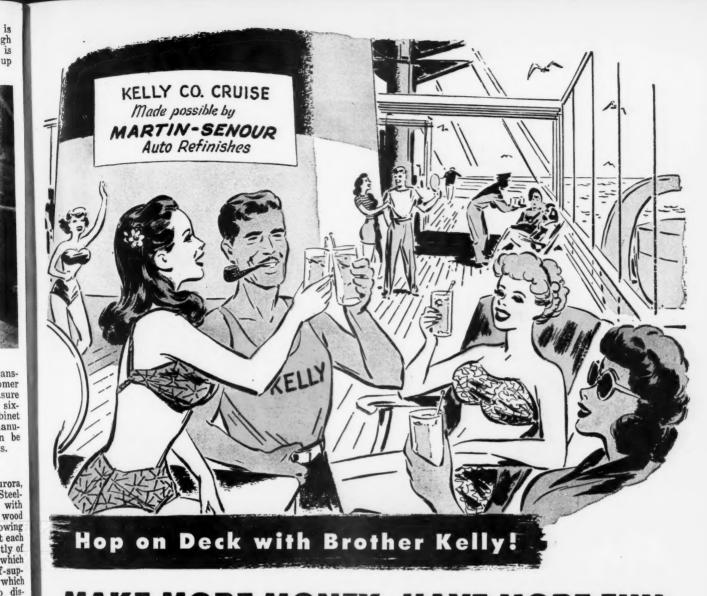
"We only use her for the whistle cheer."



SINCE 1906 Fitzgerald has made gaskets of the highest quality. Contact your Fitzgerald jobber.

Branches, Chicago and Los Angeles Canadian FITZGERALD, Ltd., Toronto





MAKE MORE MONEY, HAVE MORE FUN

Eight Quick Reasons to Switch to Martin-Senour

Higher painting profits

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ary, 1949

- 2 Exact color match to car-maker's specifications
- 3 Top quality, top durability, top beauty
- No time wasted mixing or matching
- 5 Patented pour-top can prevents waste
- No come-backs, no headaches
- Easier to handle . . . jobs out on time
- Available everywhere... call your N.A. P.A. jobber





Painting Cars the M-S Way

Sure, a winter cruise takes time and money! But brother Kelly has both, ever since he learned how to paint more cars faster and cut labor costs. Martin-Senour's ready-mixed automotive finishes save work and boost profits. No more time wasted mixing colors. Every M-S finish is factory-

matched to the car-maker's specifications. That's why every job is right the first time . . . satisfies customers and eliminates costly "come-backs." Just check the color, make and model in your handy M-S catalogue, then phone your nearby N.A.P.A. jobber. It's quick, it's easy, and it's "on the nose" with readymixed M-S finishes. Don't fight any longer with expensive, out-dated methods. Call your M-S jobber now!

MARTIN-SENOUR

2520 South Quarry Street, Chicago 8, Illinois

Tests Prove the New Dayton

CARRYA

FAN BELT PROMOTION Sells 1 out of 5

Imagine selling a spare fan belt to every fifth motorist who drives in. Imagine moving out, at full profit, your present stock of fan belts. It adds up quick to real profits, doesn't it? And that's exactly what happens when you put the new Dayton Carry-a-Spare Promotion to work. One out of every five buys!

It's the simplest, soundest sales idea yet! All you do is hand each motorist a Carry-a-Spare Dayton Fan Belt...then service his car. The special sleeve sells the belt for you. You gain an extra sale . . . and a fat, extra profit quick! . . . with little or no effort.

And to make this program sure-fire for you, you buy only fast-moving, popular-size belts ... at your regular price. Dayton gives you, absolutely free, a colorful display rack, a Sales Guide, and a new catalog. No wonder the Dayton Carry-a-Spare Promotion is upping dealers' fan belt sales sensationally! It'll do the same for you. Put it to work in your station now!

We Proved it in Atlanta!

ASK YOUR DAYTON JOBBER!

Actual sales tests, conducted in ordinary service stations and garages around Atlanta, Ga., proved the Dayton Carry-a-Spare Program sells one out of every five motorists who drive in ... both Carry-a-Spare belts and belts from regular stock! Many had their money back the first week ... their full profit the second! Your Dayton jobber has all the facts. Ask to see them, today!

The original Equipment Fan Belt

Day to one

THE MARK OF TECHNICAL EXCELLENCE

SPARE



Rubber

IN NATURAL AND SYNTHETIC RUBBER

MOTOR AGE, January, 1949

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For Further Information Use Coupon on Page 82

97

The Oil-Dri Corporation of America, Chicago, Illinois, announces the availability of Oil-Dri Industrial Heavy-Duty Enamel, a quick drying, weatherproofing enamel. This paint is compounded of a special resin base, and is said to seal and waterproof the surface it covers. The manufacturer states that Oil-Dri enamel can be used for both inside and outside painting, and that it leaves a high gloss deco-

rative finish and is said to be durable and can be repeatedly washed. Oil-Dri enamel is available in 12 colors and is packaged in pints, quarts, gallons, 5 gallon cans, and 50 gallon drums.

98

The Aero-Motive Manufacturing Company, Kalamazoo, Michigan, has announced their "Self-Wind" balance reel, for supporting portable power tools. Mounted on a beam or cable in

a work position above the operator, the Self-Wind balance reel suspends a power screw driver, drill, nut runner, or other portable power tools



within instant reach. The reel tension is adjusted to balance any tool weighing up to 10 lbs. The operator raises or lowers the tool as needed, and it stays where he leaves it. The manufacturer states that one model supports all tools up to a weight of 10 lbs. The cable tension is regulated with nut and lock, both located on the same side of the reel. The unit comes with a 6-foot length of cable.

99

The Plomb Tool Company, Los Angeles, California, has designed tool display stands for the automotive trade, consisting of standard 2 ft. by 2 ft. display boards carrying the classes of "Proto" tools preferred for sale. There are four types of stands, a triangular revolving stand, a four-side rolling stand, and an island display and a wall display.

(Continued on page 146)



"Roomy? Why this freezer is big enough to hold a cow!"





MOTOR AGE, January, 1949

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For Further Information Use Coupon on Page 82

100

The Whitaker Cable Corporation, Kansas City, Missouri, announces two new products which it has added to its line. The first of these is the Flash-Weld battery cable which, due to an electrical welding process, has all the strands of the cable fused to the terminal, thereby creating one integral part. The second new product is the Whitaker No. 707 Spark plug cable. This cable, covered with a Neoprene jacket, is claimed to offer longer life

and produce a hotter spark than any other copper stranded cable.

101

The Wells Manufacturing Corporation, Fond du Lac, Wisconsin, have added 15 new items to their line of ignition service parts. Included in these new items is the dual headlight relay designated as No. LR623. This automatic unit is equipped with a circuit breaker designed to eliminate fuse changing and the hazard of run-

ning without lights if no spare fuses are available. Other parts in this new line are for the 1949 Fords and Mercurys. These include points, condensers, distributor rotors, distributor caps, and coils.

102

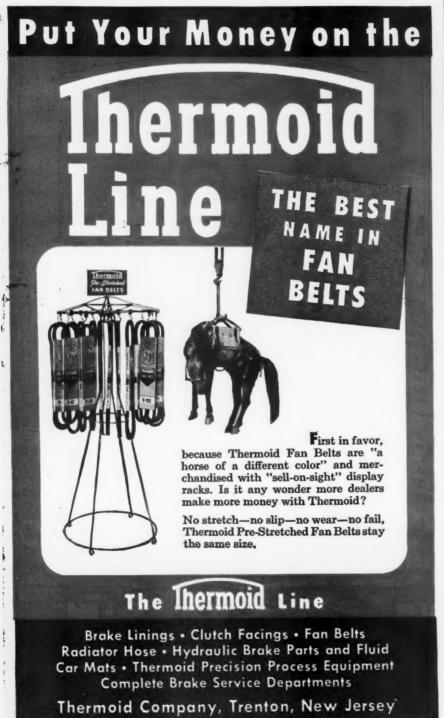
Lynn Products Company, Chicago, Ill., is featuring its line of Lynn Lightning Solderless Terminals, consisting of the Lynn service kit, terminal display board and the Dollar Pak. Lynn Lightning Solderless Terminals require no soldering and thus eliminate some of the trouble ordinarily caused by soldered connections. A "cold joint" is made with the use of the Lynn crimping tool, which cuts the wire, strips the wire, and crimps the terminal. Advantages claimed for the Lynn Dollar Pak are that it is self-



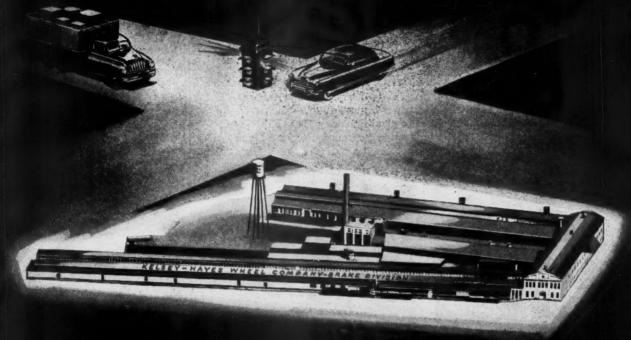
priced, needs no reference to catalog or price sheets, the merchandise is visible through a window on the package, the stock number, wire size and stud size are prominently marked for easy identification, and stock control is simplified. The Lynn company is also featuring the Lynn Display Goard for merchandising the Lynn automotive switches. One board, No. 501, is a heater and defroster switch display, while No. 502 contains two each of 10 different numbers of foglight and accessory switches.

(Continued on page 148)





Jackson, Michigan Plant World Famous sourse of Brake Equipment!



One of 8 Great Plants Specializing in Superior Automotive Products

Kelsey Maries' Jackson Plant specializes in the efficient production of brake equipment for passenger cars, trucks and buses. Kelley Mayes' brake equipment, assembled here, is famous throughout the world for safe, lasting performance. Such exclusive concentration on a particular phase of the total production in Kelbey Hayes' 8 inter-related plants assures superior quality to all users of brakes for both original equipment and change-over requirements. Kellay Ho, e., "Known for Know-How" since the beginning of the Automotive Industry, serves you best.

How ASSURES PROVEN PRODUCTS AT

KELSEY-HAYES WHEEL COMPANY

DETROIT 32, MICHIGAN

Brakes "Vacdrautic" Brake Power Units for Passenger Cars, Trucks, Buses ade by Kelsey-Hayes' 4 Michigan Plants and Windsor-Canada Plant • "Magdraulic" Electric Brases • "Luthan" Isuum Pawer Brase Equipment for Tractor-Trailers, made by Kelsey-Hayes' South San Francisco Lathan Plant • Heds Hubs Axles: Parts for Farm implements: made by Kelsey-Hayes' French & Hecht Plant at Davenport, Jowa



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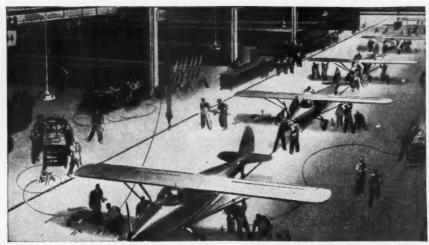
148)

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400

ary, 1949

Seven new planes completed ... at a cost of \$4.30!



New planes can't fly without control cable, and this manufacturer needed some—fast. He got it the same way he regularly gets many supplies and parts—by Air Express. Ordered in A.M., delivered to plant same day. 500 miles, 28 lbs., Air Express charge only \$4.30. So production continued without a break.



\$4.30 included pick-up and delivery at no extra charge—and receipt for shipment. All this, plus the world's fastest shipping service. That's Air Express—used with profit by every business.



Shipments go on all flights of Scheduled Airlines. Speeds up to 5 miles a minute—no waiting around. Direct service to over 1,000 airport cities, airrail for 22,000 off-airline offices.

Facts on low Air Express rates:

22 lbs. of new fashions goes 700 miles for \$4.73. 6-lb. carton of new jewelry line goes 1,000 miles for \$2.24. Same day delivery in both cases if you ship early.

Only Air Express gives you all these advantages: Special pick-up and delivery at no extra cost. You get a receipt for every shipment and delivery is proved by signature of consignee. One-carrier responsibility. Assured protection, too—valuation coverage up to \$50 without extra charge. Practically no limitation on size or weight. For fast shipping action, phone Air Express Division, Railway Express Agency. And specify "Air Express delivery" on orders.



AIR EXPRESS, A SERVICE OF RAILWAY EXPRESS AGENCY AND THE SCHEDULED AIRLINES OF THE U.S.

Profit Opportunities

Continued from page 103

For Further Information Use Coupon on P. 82

103

The Crescent Company, Inc., Pawtucket, R. I., announce the Crescent Wiry Joe Maroon Plastic Battery Cable. Some of the advantages claimed for this battery cable are that it is impervious to oil, grease, heat, abrasions, and is resistant to acids. Plastics are extremely flexible, the manufacturer states, and do not support flame. It is further stated that this cable has a heavy brass terminal which is lead coated, will not stretch, and will not set up oxidation.

104

The Bowers Battery & Spark Plug Company, Reading, Pennsylvania, has developed the Bowers heavy duty battery charger, designed to meet the charging needs of medium and large



sized operators. The Bowers heavy duty charger is said to accommodate 1 to 16 6-volt batteries or 1 to 8 12-volt batteries. This charger, which operates on a 110V-60AC outlet through the use of a full-wave selenium bridge rectifier, features a variable control which permits selection of the desired charging rate up to 12 ampere maximum.

(Continued on page 150)



"Next time you get a sitter, get a flag-pole sitter!"

You Can Depend on FRAM





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Gasoline Filter protects finely adjusted modern carburetor



Crankcase Air Filter stops the dirt where most of it enters the

WATCH FOR THE BIG ANNOUNCEMENT of Complete Engine Protection . . . Fram's amazing new discovery that seals out engine killing impurities at every vital point where they might enter or be formed. See February issues of top automotive magazines. It's sensational! It means a bigger year for you in '49!

the leader in OIL FILTER







Quality! Here's proof that you can always depend on Famous Fram Oil Filters . . . America's finest! They're proved by over 10,000,000 motorists . . . used as standard equipment by more than 70 leading car, truck, tractor and engine manufacturers. Fram Filters give top performance in removing damaging abrasives and corrosives, offer maximum filtering area and longer cartridge life. All Fram Filters are backed by Fram's unconditional guarantee.

Production! Fram is the world's largest automotive filter producer. Four big plants turn out over 20,000,000 cartridges a year. The savings of this mass production, plus Fram's longer cartridge life, give Fram users extra economy . . . assure them lowest clean-oil cost per mile.

Research! Fram pioneered the first cleanoil type filter, using outside-in flow. Fram's laboratories are constantly testing and experimenting to bring you new and better filters. The two Filters shown at the left are recent products resulting from Fram research. Now-and in the future—look to Fram, leader in oil filter quality, production and research.

Fram Corporation, Providence 16, R. I. In Canada: J. C. Adams Co., Ltd., Toronto, Ont.

OIL AIR FUEL

For Further Information Use Coupon on Page 82

105

The Philco Corporation, Philadelphia, Pennsylvania, continues to feature its custom styled Philco auto radios. One of the features of the 1948 model Philco radios is the electronic tuning, which combines push button tuning, automatic foot control, or manual tune-in. With this arrangement, the car owner can make his own push button adjustment, in case he wishes to change the stations that come in on any particular button. The automatic foot control is push button tuning without taking the hand off the wheel. This equipment is optional at extra cost.

106

E. Edelman & Co., Chicago, Ill., is now manufacturing and marketing an automatic windshield washer operates independently of the engine's vacuum system. The New Aquamatic

Windshield Washer provides as much or as little water as needed with the touch of a button. Among the features claimed for this product are hand or foot operation, "feather-touch" control (as much or as little water as required by an easy pressure of the finger or foot), and rapid installation.

107

The Oildex Corporation, Cleveland, Ohio, has developed the Oildex controlled crankcase ventilator. The Oildex is designed for the purpose of re-moving vapors from the crankcase before they condense into the dam-



You don't pay "extra" to buy a top quality PAR compressor. PAR features the finest materials and engineering "know-how" in a variety of horizontal and vertical models to suit every air power requirement-4 cylinder 2 stage in 11/2, 2, 3, 5 H.P. sizes, two cylinder 1 stage in 1/2 to 1 1/2 H.P. units. Features the Service Industry likes; very fast pumping, slow speed for longer life, troublefree operation. See your equipment Jobber for the popular-priced PAR model to streamline your own service operation.

COMPARISON - YOU'LL BUY PAR







CORPORATION PAR COMPRESSOR DIVISION PAPER PACK.





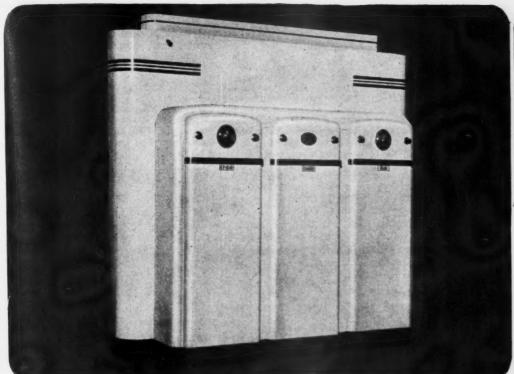


aging liquid impurities. The Oildex extracts, and then filters these vapors and returns them through the Oildex volumetric control valve to the cylinders where they are utilized as claimed fuel. The manufacturer states that Oildex retards the crankcase oil from becoming contaminated by water, acid, unburned gasoline, var-nish and other impurities, thus preventing the formation of carbonatious materials. This is said to result in the relief of sticky valves and rings.

TOR

C-B Tool Company, Lancaster, Pennsylvania, are featuring a Handi-Kit for sheet metal men. Included in this kit are four pieces. The first is the clipper cutter, which operates in a standard ¼ inch electric or pneumatic drill. It is designed to handle run-ofjob sheet metal cutting. The second is a heavy-duty clipper cutter which is designed to handle heavier jobs. For shrinking metal angles, the C-B manual metal shrinker is used. Fourth is the metal stretcher which is used to form reverse or outside angle curves. These four tools are combined in a carrying case which is furnished free with the tools.

(Continued on page 152)



Tri-Lube Battery Without Wings - Available also for recess installation or with wings for guns.

New GILBARCO Lube Line Builds <u>Customer Confidence</u>



Here's a new line of equipment that brings extra lube business, for its sleek good looks attract the growing number of customers who want lubrication service the modern way.

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Its smoothly streamlined cabinets stay good-looking too, for they are remarkably easy to keep clean and sparkling. There are no indented or projecting surfaces or ornaments to gather and retain dirt. Just a flick of a cloth over the smooth, white enamel cabinets and they gleam again like new.

That's only one of the reasons why the new Gilbarco lubrication line keeps customers coming back. There are dozens of features that make lubrication with Gilbarco equipment better and faster...and that's the kind of service the modern motorist demands.

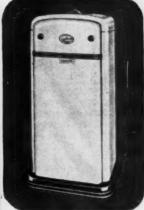
New 32-page Catalog

There isn't space here to tell about

the many models in the new Gilbarco line. But there's a handy coupon below. Send it in and you'll receive a 32-page full-color catalog.

This catalog is packed with all the facts and specifications you will want to know about Lubri-servers, spring

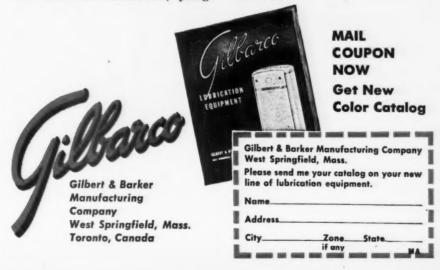
packers, gun fillers, grease guns, and all the rest. You'll find large, detailed pictures of portable units, stationary wall batteries and everything to make lubrication an up-to-date, efficient, and profitable part of your business.



De Luxe Lubri-Server air operated; portable or stationary



New, Exclusive Easy-Lift Drum Change — Labor-saving feature of all Gilbarco air-operated De Luxe Lubri-servers.



MOTOR AGE, January, 1949

For Further Information Use Coupon on Page 82

109

The DuPont Company, Wilmington, Del., has announced three new products, a fuel system anti-freeze, to prevent freezing of moisture in the fuel lines of an automobile or truck; a clear windshield sealer for stopping leaks at the windshield frame; and a non-flammable rug and upholstery cleaner. The manufacturer states that tests have proved that DuPont Gas Guard prevents the freezing of as much as 10 ounces of water in

15 gallons of gasoline at temperatures as low as 30 degrees below zero. It is distributed in pint containers, and it is recommended that it be used at the rate of one pint of Gas Guard to 15 gallons of gasoline. DuPont Clear Windshield Sealer is a transparent water-proof cement, to be used to stop leaks at automobile windshields and rear window frames. The manufacturer states that it dries quickly and adheres firmly to glass, metal, and rubber, making a tight

seal. DuPont Rug and Upholstery Cleaner mixed with water at a ratio of 16 parts of water to one cleaner, and whipped up into a rich foam, it can be used as an upholstery cleaner in automobiles as well as for the home.

110

The Firestone Tire and Rubber Company, Akron, Ohio, announces its new Polar Grip tire tread, designed to give improved traction in winter driv-



ing. The manufacturer states that more than a million Icocel particles in the tread, when exposed to the road, act as an abrasive on wet and icy surfaces. When the particles wear away, the tread is left with tiny suction cups that are said to grip the roadway, giving greater traction than can be had with conventional tires.

111

The Speedometer Service Company, Inc., Montclair, New Jersey, is marketing the Gasometer Gas Mileage Gauge, a standard vacuum gauge with a special face. The measure of vacuum on the Gasometer is the same on all car engines from 4 to 12 cylinders. By the use of this gauge, according to the manufacturer, it is possible to detect trouble as soon as it starts as well as to save gas by training the driver to maintain correct foot pressure on the gas pedal.

(Continued on page 154)



"And this is the powder room."





ACME COLOR EYE



STAN THOMPSON, Service Manager, Northwest Chevrolet, Detroit, says:

"One demonstration of the Acme Color Eye was all we needed—no more ready-mix paints for us! "We put an Acme Color Eye to work and found a saving of 33% on the cost of paint used. Even reduced our inventory by 25%!

"We are completely happy with all phases of the Color Eye operation! The formulas, easy to work from, are exceptionally accurate and produce true colors every time."

HIS PAINTERS WELCOME THE COLOR EYE FOR ACCURACY AND EASE OF OPERATION

ALEX SZANTO, Painter since 1922, says:

"I've been convinced of Color Eye efficiency since 1938.

"With Acme's latest model it takes me less than five minutes to accurately mix the exact amount I need (from ¼ pint to 5 gallons). Even metallic paints are mixed easily, quickly, thoroughly with the 'Eye'. The Color Eye method keeps pigments fresh, too. "I want color to stay and not 'drift'— I've found Acme tinting colors, with their individual formulas, do the job."

CALL YOUR ACME JOBBER

• Colors from 1936 to date.

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A paint factory in your own shop.

· No big costly color inventory.



AUTOMOTIVE FINISHES

ACME WHITE LEAD AND COLOR WORKS

DETROIT 11, MICHIGAN

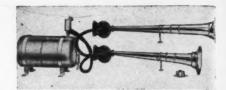
For Further Information Use Coupon on Page 82

112

Zaco Laboratories, Cleveland, Ohio, is marketing its Shortstop Ignition Spray. This compound, which comes in a special spraying container, is designed to form a coating of insulating material on all wires and parts of an automotive electrical system, forming a barrier against dampness, short circuits and stalling due to water and moisture. The manufacturer also announces Trim, a spray for protecting chrome finishes.

113

The E. A. Laboratories, Inc., Brooklyn, New York, is marketing a new air horn called the Supertone Twins. These horns are chrome finished so that they can be mounted outside the car or truck and are designed to be mounted on the hood, body, or fenders with only the chrome plated trumpets visible. They are operated by finger pressure on the steering post horn button or can be wired to operate from regular horn button. A reserve



tank is also provided so that operation is effective on uphill climbs and heavy loads.

114

Airtex Products Company, Fairfield, Illinois, has developed the Airtex Gasoline Filter with pulsation damper. The Airtex pulsation damper is designed to suppress the pressure pulsation in



the flow of gasoline from the fuel pump to the carburetor and delivers a smooth supply of filtered gasoline. The manufacturer claims that this will save wear and tear on the carburetor, insure long life, and reduce strain on the fuel pump diaphragm and other parts.

(Continued on page 156)



"Hand me my all-purpose wrench!"



World's Largest Line of **Automotive** Shop Equipment!



Low-cost, fast, 100% accurate. Saves floor space. 5 models. Begins at models. Beg \$4,275.00



GRINDERS

ROD AND INSERT SIZING MACHINE

Cuts insert bearings on solid pads. Also resizes babbitted rods. 2 models.



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nch!" ry, 1949 Foot treadle control Rapid, air oper-ated. Takes up to No. 10 rivets.



One man can lift engine blocks move crates. Hydraulic, 1 & 2-Ton models.

SPIRAL REAMER

Reams and finishes in ers and blades do 95% car truck jobs. and



Turns and grindsan 11 plate in 68 seconds - in one set-up. Hydraulic feed.



Automatically positions shoe for true-arc grinding. Prepares shoes for bonded lining. 3 models. ENGINE STANDS

Clear approach for any operation on V-8 block. Also Universal dolly.



QUIK-SET CAR STANDS

Raised or re-set in a few seconds. 100% safe. 1½, 6 and 18-ton capacities.



ALIGN BORING MACHINES

Model FSU for production work on Ford, Chevrolet, Plymouth. Model GE is universal.



PAL BRAKE DRUM LATHE

For all passenger car and light truck drums. Bench Model



Grinds cylinder heads, blocks, manifolds.

BRAKE LATHES

No special skill re-quired. Factory-perfect jobs. Turns and grinds PRESSURE MATIC PRESSES Presses,

bends straightens, rivets. tric and hydraulic - 25, 40, 60 tons.



Also 2-3 & 10-ton arbor \$315.00* in one set-up. 6 models. presses. 25 ton \$235.00*

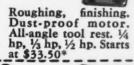
EXPANDABLE WET HONE



Hones from to .670" to 2.610". Attachments for Connecting Rod Recondition-

Brake Cylinder Honing.

BENCH GRINDERS



SEND COUPON



REAMER DRIVE

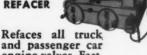
Vibrationless, quiet. Foot switch. Three speeds, 2 models.

CYLINDER BORING BAR

Bores cylinder to .0002" accuracy. accuracy, quick easy setup; begins at \$575.00*



VALVE REFACER



engine valves. Fast, accurate.

EVANS REAMER & MACHINE CO. NEW LEXINGTON, OHIO

KINDLY SEND DETAILS ON THE FOLLOWING EQUIPMENT-

(1)	(2)	(3	(4) (5) (6) (1) (8	9	(10	
(11)	(12)	(13)	14	(15)	(16)	(17)	(18)	19	

NAME

ADDRESS

*All Prices F. O. B. Factory



NEW LEXINGTON, OHIO

MOTOR AGE, January, 1949

Assure a busy tomorrow by satisfying customers today

WITH

SERVI-CAR

CALL-FOR AND DELIVERY SERVICE



GETTING business today is no problem — but holding it against tomorrow's competition may be something else again. Give yourself the extra advantage of Servi-Cars. These handy, economical machines are ideal for providing that quick, convenient "call-for-and-deliver" service that all car owners want . . . the kind of service that brings them back to you again and again.

Servi-Car makes money for you in many ways. Cuts costs by regulating work-flow on busy floors, removing finished jobs and bringing in new ones as needed. Saves time in parts pickups, draws new business from all over town and advertises you wherever it goes. Servi-Car is a necessity to efficient, modern repair service and continued progress — and you can't afford to be without it! For complete information see your Harley-Davidson dealer or write to



HARLEY-DAVIDSON

DEPT. MA, MILWAUKEE 1, WISCONSIN

FREE ad service to Servi-Car owners
Newspape. mats, cuts and local merchandising aids are available to Servi-Car owners.

Profit Opportunities

Continued from page 154

For Further Information Use Coupon on P. 82

115

The Richardson-Allen Corporation, New York City, New York, is continuing to market the Richardson-Allen Edison Portable Automatic Battery Charger. One of the features



claimed for this charger is the automatic disconnect which is designed to prevent wasted power on battery feed back. In case of line power failure, the charger is automatically disconnected from the input line voltage on the battery. It automatically restarts after line voltage has been restored. This charger is portable and can be moved from place to place. Another feature is that the charger automatically shuts off in case the cooling fan fails. It is said to have to have a uniform charging rate from start to finish

116

Techtmann Industries, Milwaukee, Wisconsin, is marketing the Muth "Brake-*-Saver," a device for flashing on a steady amber beam when the ignition is off and the emergency brake is on. The manufacturer states that this unit can be installed in any type of car or truck no matter what make or model. When the emergency brake is on and the ignition is turned off a circuit is completed which lights the dash light until the emergency brake is released, at which time the connection is broken.

117

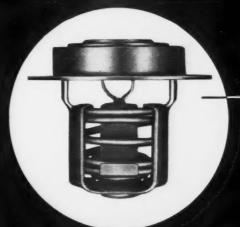
The Grote Manufacturing Company. Inc., Bellevue, Kentucky, announces the addition of a new direction signal switch to their line. The manufacturer states that this switch can be installed without removing the steering wheel and is adaptable to any size steering column from 1½ inches to 2¼ inches. Designed for installation with flasher, the switch has a positive self-cancelling feature which cannot be thrown out of time by holding the lever when turning the wheel.

(Continued on page 158)

MOTOR AGE, January, 1949

DOLE

Replacement Thermostats



DV'S for Late Model Cars

Exlusive design — proved in use. Designed to control high pump pressure... and for use with pressure caps in sealed cooling systems. Excellent economy and performance.

"ADJUSTABLES"
for Many Makes and Models

Dale Adjustable Thermostats improve motor performance by accurate temperature control for every season and type of anti-freeze. They save gas, oil and motor wear.



MAKE THERMOSTATIC REPLACEMENT A PART OF EVERY MOTOR TUNE-UP

Control with DOLE

Earn the thanks of your customers by suggesting "thermostat replacement" with every order for a motor tune-up or cooling system check. You'll bank greater profits — and they will get improved motor performance through positive cooling system control.

THE DOLE VALVE COMBANY

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1901-1941 Carroll Avenue

Chicago 12, Illinois

Representatives in Principal Cities

MOTOR AGE, January, 1949

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For Further Information Use Coupon on Page 82

118

Vulcan Motor Products, Inc., Newark, New Jersey, has announced a new line of merchandisers being presented to jobbers, covering generator and starter parts, and bronze bushing and brushes. A catalog has been released which illustrates and describes the new line. The list prices are printed underneath each merchandiser. Also included in this line is the shelf rack designed to hold four 30-compartment metal merchandisers.

119

The Electric Products Company, Cleveland, Ohio, has developed the E. P. Electric Chassis Dynamometer, which is designed to constitute a complete department in the repair shop for testing road performance of a car. With the Electric Chassis Dynamometer, the manufacturer states, it is possible to duplicate every road condition in the shop. Operated by one man, it is possible to test the ignition system, power take-off, manifolds,



cylinders and pistons, fuel system, and miscellaneous other checks on the car. The unit which absorbs the power on this dynamometer is an eddy current type absorption unit. Incorporated into this dynamometer is an automatic cooling system, which connects with the city water and allows the car to be cooled automatically while it is running. Other features claimed for this equipment are an emergency shut-off, a remote throttle control, full instrumentation, and one man operation.

120

The Trippe Mfg. Co., Chicago, Ill., is marketing a new sealed beam type replacement headlight unit. Called the Fog-Beam Headlight Unit, this re-



placement is for all vehicles using Sealed Beam headlights.

Properly aimed, the DOWN beam is used not only for dimming purposes, but is also a fog light. It can be installed on any car or truck using sealed beam headlights.

121

The Carter Carburetor Corporation, St. Louis, Missouri, announces the Electric Pusher Pump and its newly developed mounting device for side mount truck tanks. This hanger type mounting is designed for installation in truck safety tanks, cylindrical and saddle tanks alike. The entire hanger assembly with pump installed can be lifted out of the tank for servicing after disconnecting the feed wire and fuel line at the cover plate on top of the tank and unbolting the cover plate. Conversion packages for this type of mounting are also available.

(Continued on page 160)





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160) 1949 "Bill Henry and the News" will regularly tell millions of motorists about this Johns-Manville Brake Service Dealer Program over 371 Mutual Broadcasting Stations.

Johns-Manville launches new 1949 public relations program for BRAKE SERVICE DEALERS!

371 Mutual Network Stations to be your outlet for telling millions of motorists about your services and your tie-in with this Dealer Public Relations Plan . . .

Here's a specific Plan to build customer good will for you... to help overcome consumer resistance to high prices ... to help answer customer complaints about labor costs.

It's a complete, packaged public relations and merchandising plan with tried and proved business-building aids that have been tested with hundreds of dealers. It includes the tremendous facilities of 371 Mutual Network Stations for regularly telling your customers and prospects that they can get a square deal from J-M Dealers co-operating in the Plan. You will be prominently identified as a co-operating Dealer.

Get full details of this plan from your distributor

There is not space to list full details here... get the complete story from your J-M Distributor. Phone or write him today for the entire story telling you about the benefits you will get from this public relations and merchandising program and the nationwide radio network that is backing it.

Johns-Manville



BRAKE LININGS
BRAKE BLOCKS
CLUTCH FACINGS

FRICTION MATERIALS

For Further Information Use Coupon on Page 82

122

The Doyle Vacuum Cleaner Co., Grand Rapids, Mich., is marketing an Automobile Vacuum Cleaner for use in service stations and repair shops. The Doyle cleaners come in two sizes, with the Model 100 handling 100 cu. ft of air per minute and Model 200 handling 200 cu. ft. of air per minute. The total weight of Model 200 is 70 pounds. The manufacturer states that the motor and all working parts are entirely protected from dirt and dust, and that the cleaner will suck up water, stones and car floor refuse as well as dust and dirt. There are 22 quick-change varuum attachments available for use with the Doyle cleaner.

123

The Sun Electric Corporation, Chicago, Illinois, has developed a line of test equipment to meet the need of the



MERRICY YOU ROLL MONG!



"LITTLE JOE" The Mechanic's Handy Seat

The mechanic sits relaxed 12 inches from floor, with every tool near at hand in the convenient 14" x 18" heavy steel tray



F. B. 258 ROLLER

The Gi-Gr-Nite Roller can be adapted to thousands of applications where a free-rolling, easy pivoting caster is required, such as Lubricating Equipment, Tool Chest, Tire Racks and Beverage Coolers.

speedometer testing field. This is a portable speedometer tester with which any model speedometer can be given an actual operating test for acand calibration without removal from the car. The Sun Corporation continues to feature its master speedometer tester, their Sun Master Distributor Tester, and the Sun Master Motor Tester. The Sun Motor Tester is equipped to make a complete diagnosis of engine trouble, and according to the manufacturer, it tests batteries, starters, coils, condensers, points, fuel pumps, carburetors, timing, condition of valves, rings, and so forth.

124

The Cristy Chemical Corporation, Worcester, Mass., announces a com-plete new line of automotive antifreeze products. Included in the line are permanent anti-freeze; type "S" radiator anti-freeze; Cristy Felxoil, for insuring flexible oil at sub-zero temperatures; and Cristy Drygas, the gas line anti-freeze.

(Continued on page 164)

If you can walk on the floor you can roll on it with a AUTO CREEPER

Model D AUTO CREEPER

ORIGINATED

quality and dependability.

By Geiger-Knight over 9 years ago the free and easy rolling Gi-Gr-Nite Auto Creeper, with the solid bed, has long been favored in shops everywhere that demand the best in equipment. It features

easy pivoting 31/4" rollers, heat treated axles, high

LO-BOY

For the mechanic to sit on while straightening frames or working on hard-to-get-at jobs. Also for convenient moving of motors in service department or show room.



"I just passed the boss' laptitude test!"

CLINTON, MICHIGAN
In Canada: Advance Steel Products, Ltd., Chotham, Ontario

DRILL IT

Better

BRADFORD TOOLS

Whatever your drilling job, there's a Bradford Drill in the <u>right</u> power rating, size, and housing type to fit your work requirements—from intermittent use to full-time production line operation.

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Bradford Drills are designed from grip to bit to work easier on the job—and stay on the job longer. All 15 models are 100% ball bearing. Powerful motors give performance far beyond rated capacity. Housings are designed to maintain better balance, handier operation in any working position. All gears are chrome-moly steel, heat-treated to correct hardness, and helical-cut for greater tooth contact. First-grade Jacobs chucks are standard equipment. Threads are ground on chuck spindle to give greater rigidity and perfect fit, seat and alignment of the chuck.

On-the-job performance will prove to you that a Bradford is your best drill buy. See your Bradford distributor—tell him your drilling requirements—he'll demonstrate those Bradford Drills that will do your job better, at less cost. For complete specifications on all Bradford Tools, write for new catalog No. 51-A.

PORTABLE ELECTRIC DRILLS • SAWS SANDERS • BENCH AND PEDESTAL GRINDERS • POLISHERS

GRINDERS • POLISHERS BUFFERS •

THE BRADFORD MACHINE TOOL CO.

Precision Since 1840



Metalmaster

1/4" Palm Drill Model 24

Completely one-hand operated. Drills $\frac{1}{4}$ " in steel, $\frac{1}{2}$ " in hardwood. Net weight, $3\frac{3}{4}$ lbs. 110 or 220 volt AC/DC motor. No load, 2100 rpm; full load 1100 rpm.

Price

\$37.00 complete





Metalmaster TRIPLE TOOL Model 3-4-1

Ideal all-purpose for service shop. Converts from 5" Disc Sander and 5" Polisher to Drill by removing backing pad and attaching 7B Jacobs chuck to spindle. Drills 1/4" in steel, 1/2" in hardwood. Net weight 6 lbs. 115 volt AC/DC motor. Free disc speed, 2300 rpm; normal load, 1400 rpm. Accessories include 3 sanding discs, lamb's wool bonnet, backing pad and Jacobs chuck with key and patented kevholder.





Price \$48.75

complete

663 EVANS ST. CINCINNATI 4, OHIO

The New INLAND EN AIR GLIDE



Now...sell an extra low pressure tire with a 15-month written warranty

121/2% TO 25% MORE AIR ... 14% LESS PRESSURE

Independent dealers everywhere are meeting the growing replacement demand for tires that combine safety and mileage . . . and real low-pressure riding comfort . . . with Inland's warranted "Air Glides."

With the addition of "Air Glides" to the Inland line, Inland's written warranty gives Franchised Inland Dealers another great advantage in their communities—regardless of how stiff their competition is.

True to its name, the new Inland actually *glides* a car over the road... every bump and shock is gently absorbed; steering ease is increased, and the car's repair bills are kept at a minimum.

But the new Inland is more than a bigger, softer, easier riding tire. It's built for mileage as well as comfort. Here are some of the reasons you can promise

longer life with the "Air Glide" . . . and back it up with a full-coverage 15-month written warranty:

Inland's own heat-fighting "Cool Twist" * Rayon Cord means more cooler running miles;

Scientifically engineered wide-rib tread for increased wear and quick, safety-sure stopping;

Extra-wide breaker absorbs and distributes vertical and lateral shocks, thus eliminating cord fatigue in the body of the tire.

Exclusive "Talox" method locks the extra-wide plies to the bead with talon-like tenacity;

Tough, live rubber carcass for extra long life and safety.

A FULL-COVERAGE WARRANTY THAT SELLS TIRES

You give your customers extra protection with the Inland 15-month written warranty. It's one of the strongest, fairest warranties in America . . . full-cover-

age against all road hazards—no mileage limit. It's the real sales clincher with the new Inland "Air Glide."

YOU'RE THE BOSS WITH THE INLAND LINE

With the new "Air Glide," the famous Inland "Heavy Service" and the Inland competitively priced "Hiway Service," you're in the tire business for yourself... with a line that means more profits—at any price level! And you're the boss. You make your own adjustments on the spot with no delay, no red tape. We stand behind your decision.

RUSH COUPON NOW!

Be one of the first in your community
to offer this new Inland
"Air Glide." Your automotive
distributor can set you up in a
few minutes to start selling
one of the hottest tire deals
in America. Call him or send
coupon for complefe details,

 *T. M. Inland Rubber Corporation

Inland Rubber Corporation

146 W. 27th St., Dept. M-41, Chicago 16, III.

Please send me details about the new Inland "Air Glide" and the complete Inland line,

Name

Address

City

... State.....

Count

County.....

y, 1949

For Further Information Use Coupon on Page 82

125

The Dickson Manufacturing Company, Inc., Mishawaka, Indiana, has developed the Dickson Automatic Rear Door Lock, a device for keeping the rear doors locked until the driver releases it. The device is operated by the opening of the front door, so that the rear door cannot be opened unless the front door is first opened. It is designed to prevent accidents caused by children opening rear doors, prevents sneak entries at lonely inter-

sections, petty thievery, or passengers thoughtlessly leaving a moving car. These locks are available for all makes and models of four-door sedans, and a special arrangement is available for cars with the rear doors hinged on the center post.

126

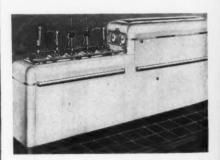
The Dayton Rubber Company, Dayton, Ohio, has organized a "Carry-A-Spare" program for merchandising fan belts. Included in the program are spe-



cially printed fan belt sleeves, which portray the idea of being prepared for an emergency, and a new display rack designed to hold the complete assortment of fan belts. The Dayton Rubber Company states that it eliminates storage problems and wall boards, bring the fan belts out where the customers can see them.

127

The Lincoln Engineering Company, St. Louis, Mo., is offering two new products. The first is an all-steel grease fitting dispenser, which mounts on the wall or on the ends of the parts bin. It can also be set up for



counter display. The assortment contains a total of 1050 Kleenseal fittings of the eight most popular sizes. The second Lincoln product is the Lincoln Masterluber. This unit houses three air-motor operated grease guns and the original refinery containers from which lubricant is pumped. Five hose assemblies—two chassis, two gear, and one air—are individually mounted on air-operated, automatic retracting reels. These are designed for use with one or two lifts and permit two men to work at the same time.

128

Shur-Lift Products, Inc., Chicago, Illinois, is marketing a three-ton scissor-type jack with a range of from 4½ to 14½ inches. Among the features claimed for this job are non-skid axle top plate, non-skid ground bottom plate, ¼" thick steel elevating levers, and a universal type power joint.

(Continued on page 166)

BRUNNER AIR helps you serve better

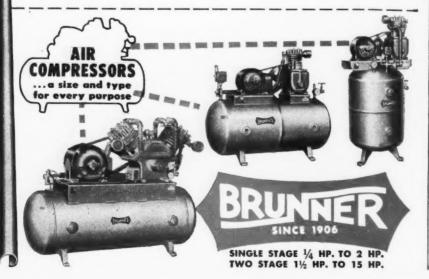
HOW MUCH does it cost?



That depends upon you...not the price tag. An air compressor should be selected on the basis of what it can add to shop income. Make a list of the air-powered services you could sell...compute the air required to operate these tools... then go get the most efficient and dependable air compressor money can buy. That air compressor is undoubtedly the most important "tool" in the shop...it's the one that earns the payroll and the profit.

There is more to an air compressor than can be told here. Call your Brunner jobber. He will show you, part by part, how compressor design and operating speeds effect efficiency, dependability and service life...why the price tag is the last place to look when buying income from air compressors.

BRUNNER MANUFACTURING CO. Utica 1, New York, U. S. A.



Get plenty of speed on your surfacing jobs with **SKIL Disc Sanders** Anyone can speed repair jobs with SKIL Disc Sander. It simply does faster, cleaner sanding from start to finish. And that means faster turnover . . . greater volume . . . and larger profits for you. Put SKIL Disc Sander to work in your shop now. Take your pick of 5 husky models. All easy to handle . . . all amply powered . . . all sturdily built to stand the gaff of any sanding job you have. Ask your SKIL Tool Jobber for a demonstration today!

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For Further Information Use Coupon on Page 82

129

Pratt Industries, Inc., Frankfort, New York, is featuring the Pratt Spiral Mufflers for farm tractors. According to the manufacturer these mufflers are designed to meet the re-



quirements of rugged tractor usage, and are constructed with a four-ply spiral rib that puts additional strength into the shell and gives reinforcement where it is needed. It is claimed that a minimum of back pressure and noise are accorded with this muffler. Premium steel, coated with corrosionresistant paint gives all-weather durability without excessive weight.

The Auto Specialties Manufacturing Company, St. Joseph, Michigan, is manufacturing a new Ausco Hydraulic Floor and Curb Jack. Some of the features of this jack are: the handle, which can be swung back out of the way when not in use; the full contact of handle and pump through entire 90 degrees travel, the full radial thrust

bearings in the casters; the power unit which is equipped with a safety release to prevent overload; and the self-leveling iron saddle with a low height of 4 in. The curb jack has a capacity of one and one-half tons, while the floor jack comes in the 2-ton model and a 4-ton model.

131

The Keystone Compressor Company, Philadelphia, Pennsylvania, is marketing its 1½ h.p. and their 2 h.p. two-



stage horizontal type compressors. The feature claimed for this type compressor is that there are only three

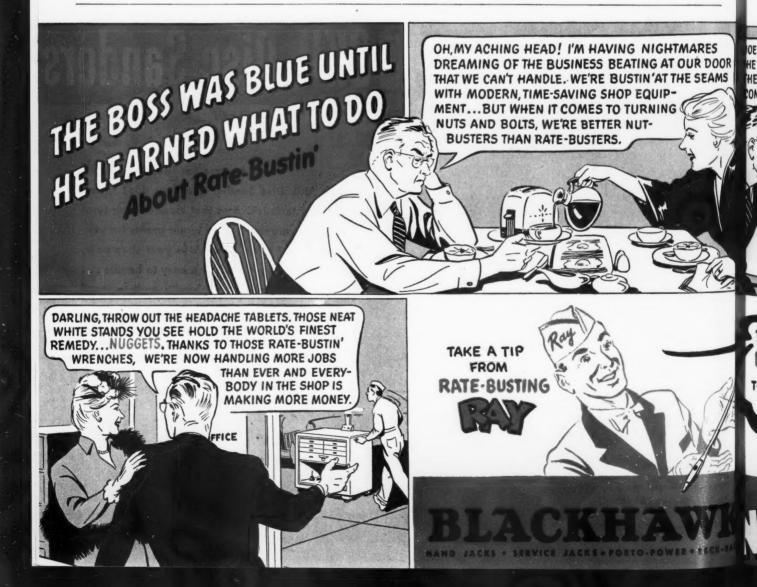
moving parts, a one piece twin cylinder system, an eccentric shaft, and a scotch yoke. It is claimed that the piston never requires new rings because the end of the center driven piston are constantly supported by the cylinder itself. The features of the Keystone two-stage compressors include completely automatic opera-tion, counterbalanced crankshaft, Timken tapered roller bearings, reed type stainless steel valves, and Multi-Vee belt drive.

132

The Witco Chemical Company, Chicago, Ill., has developed a new Witcote formula (No. 4), which is said to do a better job of vibration dampening and have better resistance to abrasion from flying stones and gravel. In addition, the manufac-turer states, it has been listed by Underwriters' Laboratories Re-Examination Service. Other advantages claimed for this product include a process of homogenization which keeps the material from settling in the drum, as well as improved spravability.

133

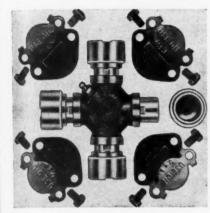
The Burton-Rogers Co., Cambridge, Mass., representing the Hoyt Elec-trical Instrument Works, is featuring the Hoyt Cell Tester, which has adjustable prods. It is claimed that this tester can be used to test all batteries, due to the adjustment feature, and has an additional feature of a special



light which illuminates the dial in dark places and goes out when the cell is dead, burns dimly when the cell is low. A "load switch" on the tester makes it actually two instruments: a cell tester and a regular voltmeter for determining the "end of charge" for batteries on the line.

134

The Borg-Warner Service Parts Company, Chicago, Illinois, announces a more complete Universal Joint line. Having previously confined its distri-



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bution to the Mechanics Universal Joint line, the manufacturer states that it is now augmenting it with Replacement Repair Kits for Spicer, Detroit Ball and Cleveland Joints. The manufacturer states that prices will be competitive with those being quoted by the basic manufacturer.

135

Kirkling & Company, Burbank, California, is introducing the K & W Radiator Seal in its new 8 ounce lithographed can, featuring 20 per cent



more seal. Also announced is an improved K & W Metal Applicator unit, the feature of which is the 5-stage switch, permitting operation at various heat ranges necessary to diversified work. It is provided with a built-in voltmeter.

136

The Commercial Solvents Corporation, Terre Haute, Indiana, are featuring Peak and Nor'way anti-freeze. Peak, a permanent anti-freeze, is made from ethylene glycol and contains inhibitors to guard the cooling system metals from rust and corrosion. Nor'way anti-freeze is made from methanol and also contains cor-

rosion inhibitors and a special ingredient that is designed to reduce loss from evaporation.

137

The Associated Producers Inc., Detroit, Michigan, has developed the Turbo Flush, an item for flushing cooling systems without removing any parts from the car. To operate the Turbo Flush, the Neoprane safety hood is snapped over the radiator filler neck, the switch is turned on, and the rest is automatic. A special solution is circulated through the radiator end block at a temperature of 180 to 200 degrees F., which is said to free the foreign material and carry them entirely out of the cooling system. In-



corporated in the unit is a 7 lb. safety limit pressure control which keeps the circulation constant.

(Continued on page 168)



HALLOWELL

READY-MADE WORK BENCHES OF STEEL



... CAN BE BOLTED TOGETHER TO FORM A continuous WORK BENCH

The serviceable, ready-made "Hallowell" Work Benches of Steel are ideal equipment for modern shops. "Hallowell" Benches have smooth, long-wearing steel tops, are also available with heavy, high-grade laminated wood tops,—or steel tops covered with "Tempered Presdwood." Made in 4 standard heights, 3 widths and 7 lengths, these "Hallowell" units can be used either individually or bolted together to form a continuous work bench—most any length—a money-saving feature not practicable with "nailed-together" wooden benches. The "Hallowell"—rigid as a rock—does not require costly bolting to the floor.

Write us for the name and address of your nearest "Hallowell" Industrial Distributor and for your copy of the "Hallowell" Catalog.

OVER 45 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNSYLVANIA

BOX 561

CHICAGO . DETROIT

ST. LOUIS

SAN FRANCISCO

Profit Opportunities

Continued from page 167

For Further Information Use Coupon on P. 82

138

The Tudor Chemical Specialties, Inc., New York City, New York, is featuring six products in the field at this time. They are the Quickee Glad Rag, a polishing cloth for cars; the Glad Rag Anti Fog-Cloth, for fog proofing and cleaning windshields; the Quickee Windshield and Quickee "Glit" windshield and chrome cleaner; Quickee Upholstery Cleaner; Quickee Auto Water Blotter, which is designed to protect gasoline fuel systems; and Quickee Concentrated Liquid Car Wash.

139

The Fram Corporation, Providence, Rhode Island, has developed the new Fram Pressure Crankcase Ventilator, which provides a flow of clean, filtered air into the crankcase. This is said to remove blow-by gases and other harmful products of combustion before they have a chance to combine with the



engine lubricating oil. The Fram unit has an electric blower which is controlled by the ignition key. It uses a replaceable cartridge which can be changed when necessary in a short period of time. The ventilator is available in two unit sizes to fit passenge cars and trucks.

140

The Grayson Tool Company, Inc., Hastings, Neb., is manufacturing the Grayson Motor Turning Tool. This tool is designed for use when a mechanic has to adjust bearings or make ring installations. It is said to permit rocking back and forth to get the feel and stopping the motor exactly where the mechanic wants it stopped. Only one hand is required for operation. The tool consists of a pair of scissorstype teeth which engage with the teeth on the flywheel to give a secure gripping action.

(Continued on page 170)

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For Further Information Use Coupon on Page 82

The J. W. Speaker Corporation, Milwaukee, Wisconsin, is marketing an All-Weather Radiator Front, designed to protect the radiator from bugs in the summer and keep the radiator protected from cold winds in the winter. The unit consists of an aluminum wire screen which permits the winter of the insects which are dehydration of the insects which are then swept from the screen by a stiff bristle brush which is controlled from the glove compartment. The winter

shield is waterproofed by a double coating of pyroxylin. It is adjustable to any height by the same control that operates the brush.

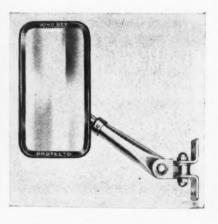
The Allen Electric & Equipment Company, Kalamazoo, Michigan, is announcing its new and improved syncrograph. This new model, the manufacturer states, was introduced to keep abreast of changes in basic distributor desired tributor design as recently made by



one of the leading car manufacturers. It states that the improvements include a constant torque drive, a motor driven high capacity vacuum pump, a sensitive aircraft-type vacuum gage calibrated so as to measure distributor adjustments in one-half tenths, a new specification scroll indexed by vehicles, and a new universal Ford fixture that handles all models of Ford, Lincoln, and Mercury.

Grand Specialties Company, Chicago, Illinois, announces three portable shop cranes. No. 1-C with a lift up to 7 ft., and No. 2-C with a lift up to 8 ft. 6 in., have a capacity of 3000 lb. No. 7-C with a maximum lift of 10 ft. 8 in. is guaranteed for 4000 lb. lift. Seven turns of the crank lifts the load approximately one foot When the load approximately one foot. When the operator stops turning the crank, the load is held in that position. No. 7-C may be supplied with hydraulic operation with extra reach and lift capacities.

American Automatic Devices Com-pany, Chicago, Illinois, introduces the King Bee Close-Coupled Universal Right or Left Hand Mirror with over-



size vision. In rectangular style measuring 4½ inches x 8½ inches, the short extension arm can be extended to 14 inches.

(Continued on page 174)



GASKET SETS

for all popular makes and models of cars, trucks and tractors

OUFEL-PRO

MAKE MORE PROFIT PER JOB with FULL GASKET SETS!

When you do an overhaul or valve grinding job, you can increase your profits. You can insure greater customer satisfaction. You can do both by installing Fel-Pro FULL Gasket Sets. Why pass up these extra profits? Why risk losing good customers simply because you fail to replace all the gaskets? Why not re-gasket the entire job with Fel-Pro FULL Gasket Sets? You can always depend on Fel-Pro Gaskets to give complete, compression-tight, leak-proof service. Fel-Pro makes original equipment gaskets for many leading car manufacturers. Why not make Fel-Pro your gasket source, too? At your jobbers, Fel-Pro Gaskets are available in Full Gasket Sets, in Valve Grinding Sets or as individual gaskets. Start saying, "Fel-Pro" TODAY!

STOP every "DRIP"
and keep him stopped
use FEL-PRO!

Write for the New FEL-PRO Catalog!

A new, informative catalog, containing complete
listings of all gaskets
needed for popular makes
and models of cars and
trucks, is yours for the
asking Write for your
copy TODAY!



FULL GASKET SETS, PACKINGS, GREASE RETAINERS

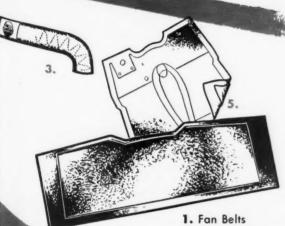
FELT PRODUCTS MFG. CO.

MOTOR AGE, January, 1949

171



Safety Kated Line



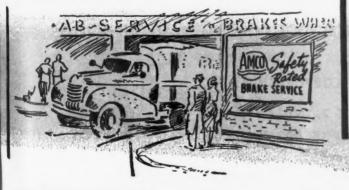
- 2. Radiator Hose
- 3. Curved Radiator Hose
- 4. Miscellaneous
 Automotive Hose
- 5. Car Mats
- 6. Koverugs

BONDING

- 1. Convection Ovens
- 2. Infra-Red Ovens
- 3. Bonding Tape and Clamps
- 4. Uni-Fuse Brake Lining Sets for Bonding

FOR PASSENGER CARS

- 5. DeLuxe Brake Lining Sets
- 6. Popular Car Sets: Amcobond and Wire-back



It's Complete!

It's Cut-Out

for YOU!

When you put up that AMCO SAFETY RATED Sign...it means you're in the PLUS PROFIT business!

You concentrate your sales efforts under the AMCO SAFETY RATED Banner ... and that means when you push one ... you're pushing the entire SAFETY RATED Line, from brake lining to the new KOVERUG, the latest thing in a floor mat cover for old and new cars.

AMCO's Line is complete...you NEVER HAVE TO PASS UP BUSINESS or substitute a less profitable brand! Every customer can enjoy SAFETY RATED performance in a brake lining... at the PRICE HE DESIRES TO PAY... from the highest quality... to the most competitively priced merchandise.

See your AMCO Jobber immediately. Get the full particulars. Then get yourself set up so you can begin immediately to enjoy the PLUS PROFITS from a line that's really completel . . . Write

ASBESTOS MFG. CO. DEPT. A-4, HUNTINGTON, INDIANA

949



Profit Opportunities

Continued from page 170

For Further Information Use Coupon on P. 82

145

The Bradford Machine Tool Company, Cincinnati, Ohio, has introduced a new 10-inch vertical-type portable electric polisher.

The Model 109 Polisher has been designed to make power polishing a fast operation, obtaining a hard, bright finish on all types of smooth



surfaces. Particularly suited for automotive work, the new Bradford Polisher is designed for ease of handling in any working position, and its vertical spindle construction is said to enable the operator to reach into difficult places encountered in auto body polishing.

difficult places encountered in auto body polishing.

All gears used are made of alloy steel, and heavy-duty ball bearings are used throughout. An aluminum housing completely encloses the tool. The rear grip has a trigger switch with a lock for continuous operation.

(Continued on page 176)



"Barney's Collision Shop? How much commission will you give me for bringing some business?"

MOTOR AGE, January, 1949

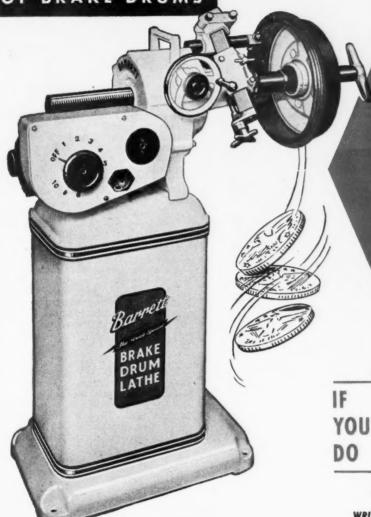
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RN DOLLARS OUT BRAKE DRUMS Machining Only Two Brake Drums Per Day (3 sets per week) Returns You \$936.00 Per Year—\$438.00 More Than The Cost Of The New Barrett B-20 Lathe



You can purchase a Lathe with the profits on the drum machining business you now pass up, or the dollars you pay some other shop for this service.

FIGURE YOUR PROFIT ON DRUM MACHINING ALONE ... (Average Charge To Customers—Per Drum \$1.50)

Income Per Year (Drum Turning Alone) Relines Per Week One Car.....\$ 312.00 Two Cars..... Three Cars.... 936.00 Four Cars..... Five Cars.... 1560.00 Six Cars..... THIS IS 92% GROSS PROFIT!

WRITE NOW FOR A DEMONSTRATION AND FURTHER DETAILS

NOTICE:

LATHE AND BRAKE DOKTER USERS!

New Adapters now available for all Lathes (any make) and Brake Dokters to handle 1949 Ford, Mercury and Lincoln.

10 ORDER — Give make, model and serial number of machine.

TWENTY-FIRST AND CASS . ST. LOUIS 6, MO.

The World's Finest Brake Service Equipment

MOTOR AGE, January, 1949

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1949

TEAR OUT-MAIL NOW

BARRETT EQUIPMENT CO.

21st & Cass, Saint Louis 6, Missouri, U.S.A.

We are interested in your Brake Drum Lathe as advertised.

☐ Have Salesman Call

Furnish Information on Lathe

☐ Furnish Information on New Adapters

NAME ..

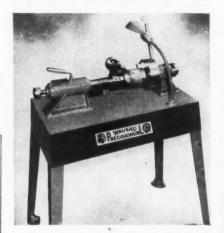
STREET

For Further Information Use Coupon on Page 82

The Black & Decker Manufacturing Company, Towson, Maryland, has announced the first of a new line of portable electric impact wrenches. new impact wrench will tighten or remove either left or right-handed nuts, bolts, and cap screws. The range of this tool is rated at %-in. thread diameter and will be known as the %-in. Impact Wrench. A reversing switch allows the unit to be used for either driving or removing fasteners, the switch being mounted on the lower side of the housing where it is protected from accidental contact.

The Wausau Motor Parts Company, of Wausau, Wisconsin, announces a new method of piston resizing.

The new method employs the "Precisionurl," a unit which resizes a piston by knurling the surface. The knurling is done by a special, meteredfeed knurling wheel which contacts the piston as the latter rotates in contact with the wheel. The amount of rotation, the degree of knurling pressure and the point of contact of wheel and piston are all under control of the operator. Built-in jeweled dial gage measures the amount of expansion as it is being actually produced



in the piston, thus, according to the manufacturer, eliminating any possibility of over or under expanding. The knurling raises the surface of the piston in direct proportion to the amount and depth of metal displaced by the knurling impression. No percussion, heat, or strain of any kind is employed in obtaining the amount of expansion desired, and it is said that pistons will maintain their expansion indefinitely.

148

The Electric Auto-Lite Company, Toledo, Ohio, is now marketing the Hi-Level battery. This battery has extra plates for greater capacity and, according to the manufacturer, gives up to 70 per cent more life expectancy. The manufacturer states that this battery requires addition of water three times a year in normal car use.

The R. E. Dietz Company, New York City, New York, is featuring its No. 323 Reflector Flare Kit. This kit holds 3 reflector flares in a specially designed box. These flares, equipped with Stimsonite lenses, are said to be stable when placed on the road, even in high winds.

(Continued on page 178)



"Junior!"

NEW **IMPERIAL GAS AND OIL LINE SERVICE CENTER**



FLEXIBLE GAS AND OIL LINES

FLEXIBLE HOSE FITTINGS

(For Oil Filter Lines, etc.)

With this compact, economical Imperial Gas and Oil Line Service Center you can handle practically any gas and oil line job that comes into your shop . . . including

oil filter lines.

Contains 166 of the most needed Brass Fittings, 17
Flexible Gas and Oil Lines plus 150" of Hose and 23
Attachable Fittings for making up filter lines, special lines and out-of-stock items. All are contained in one sturdy steel cabinet with 4 drawers and covered top compartment. Everything clearly labeled. Handy Data Charts included. Ask for Bulletin No. 373.

See Your Jobber

No. 444-F Imperial Gas and Oil Line Service Center complete with 3-in-1 Stock... ..\$39.91 (Resale value of parts \$61.88)

FITTINGS Lid folds down to protect fuel lines. Closed size 22½" x 11½" x 10½"

FITTINGS

IMPERIAL

Has everything you need gas and oil line work

THE IMPERIAL BRASS MFG. COMPANY 1217 W. Harrison St., Chicago 7, Illinois

BRASS FITTINGS - FLEXIBLE LINES - SHUT-OFF VALVES - STRAINERS SERVICE AIDS - BARREL FAUCETS - TUBE WORKING TOOLS

NOT

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Want a king-size reputation for service?

One way to build up your reputation is to let customers know you're using only the best materials.

And when it comes to bearings, that's an easy thing to do. Just point out the trade-mark "Timken®" on every tapered roller bearing you install.

"Timken" spells top quality to car owners everywhere because years of dependable performance and consistent advertising have made "Timken" the best known name in bearings.

So to make your reputation grow and grow . . .



Just tell 'em it's TIMKEN



Timken tapered roller bearings have a king-size reputation for service, too. Used in most leading makes of automobiles, trucks, tractors and buses, they take the toughest radial, thrust and combination loads.

They eliminate friction, hold wear to a minimum, keep parts in positive alignment. And they normally outlast the automobiles in which they're used!

This long, dependable service comes from the Timken Company's well-known leadership in advanced design, precision manufacture, rigid quality control, and special analysis steels.

Why take chances with quality? Make sure the trade-mark "Timken" is on every tapered roller bearing you buy and use. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TAPERED ROLLER BEARINGS

NOT JUST A BALL 🔾 NOT JUST A ROLLER 🥽 THE TIMKEN TAPERED ROLLER 🗁 BEARING TAKES RADIAL 🗓 AND THRUST — 🛈 — LOADS OR ANY COMBINATION — 🛈 —



1949

For Further Information Use Coupon on Page 82

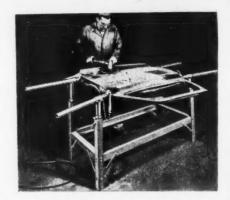
150

The Sterling Tool Products Co., Chicago, Ill., announces the new Sterling Portable Century Sander. The tool is designed for one hand operation, the manufacturer states, and the pad speed is 5,000 rpm. The pad is removable, and uses 1/3 of a sheet of standard 3 inch by 11 inch sandpaper. It is claimed that this sander is suitable for use in autobody shops, for feather-edging, removing lettering

and sanding surfaces. The housing is made of die cast aluminum.

151

The Blackhawk Manufacturing Company, Milwaukee, Wis., is announcing its Reck-Rack, a unit for body shops. This stand is for use on large panel straightening jobs, such as deck lids, fenders, doors, etc., where it has been removed. The Reck-Rack is designed to hold rigidly



any size or shape of body section in the most convenient position and height for all roughing and finishing jobs. The Reck-Rack consists of a four-legged rack with adjusting arms which can swing in any direction. The work is clamped to these arms with vise grip pliers.

152

The Supco Products Corporation, New York City, New York, is introducing a new line of master cylinders for hydraulic brakes. Advantages claimed for this new cylinder are super-finished bore, extra surface hardness, and improved grain structure. The unit includes all integral parts, including pistons and oversize cups, which, according to the manufacturer, make a better seal.

153

The Weaver Manufacturing Company, Springfield, Ill., has developed the Weaver Twin Floor Lift, a hydraulic power operated lift which is said to be installed in a few hours on any type floor. Guiding tracts and



front lifting units are held down by lag screws or studs depending upon the type floor on which the lift is installed. The lift is so designed that mechanics have a free, unobstructed working area with access to all underchassis parts. The lift is adjustable to wheel base length, and the manufacturer states that it will handle all passenger cars and light trucks.

154

The Bear Manufacturing Co., Rock Island, Ill., has designed a gage to check the spindle of any car or truck without removal of the spindle from the vehicle. The gage revolves around the spindle and checks in thousandths.

(Continued on page 180)



MOT

MAKE YOUR CUSTOMERS YOUR BEST SALESMEN ...

install pistons of A L C O A LO-E X





Ever see a customer whose face didn't fall when you told him he needed a piston replacement job? It's a big investment! But he usually decides to go ahead with it on your say-so.



Renewed engine performance is what he expects for his money. Don't disappoint him! Install aluminum pistons of genuine Alcoa Lo-Ex, and he'll have a smoother-running car, one that costs less to operate.

That's what happens when you install Alcoa Lo-Ex pistons! Your customer gets results that make him happy he came to *your* shop. You get some free advertising.

Alcoa Lo-Ex alloy gets rid of heat fast—permits a close piston fit. Why stock "just any" aluminum pistons? Build your reputation with pistons of Alcoa Lo-Ex, finished by leading manufacturers.

ALUMINUM COMPANY OF AMERICA, 2133 Gulf Building, Pittsburgh 19, Pennsylvania.



He'll tell his friends that your shop is the best service garage in town...that you put more "snap" into his car than he dreamed was possible!



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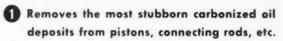
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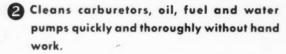
rom ound lths. 180) Aluminum Pistons of ALCOA LO-EX



STRONG REASONS WHY YOU SHOULD USE MAGNUS 755

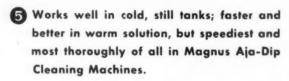
It's a Multi-Purpose Cleaner





- Cleans all other dismantled engine parts.
- 4 Desludges engines without dismantling.

It's a *Thorough* Cleaner in *Cold or Hot* Solution



It's a Lasting Cleaner

6 When other cleaners of this type are exhausted, Magnus 755 solutions are still going strong, with months of service life remaining.

It's a Safe Cleaner

Non-toxic, non-corrosive. Safe for all metals, and harmless to gaskets and packing.

Desludging of engines without dismantling is a Magnus 755 application that sets up mighty attractive profits for you. The three other uses will cut your servicing costs PLENTY! YOU should try 755!

MAGNUS CHEMICAL COMPANY • 174 South Ave., Garwood, N. J.
In Canada—Magnus Chemicals, Ltd., 4040 Rue Masson, Montreal 36, Que.

Service representatives in principal cities



Profit Opportunities

Continued from page 178

For Further Information Use Coupon on P. 82

155

The Allen Electric and Equipment Company, Kalamazoo, Mich., is now marketing its Armature Lathe and Undercutter. This tool is said to turn commutators to a mirror-like finish, absolutely true with the bearings. It



handles armatures up to 7 inches in diameter with a maximum over-all length of 16 inches, and with shaft diameters from 7/16 to % of an inch. The 17½-inch lathe bed has an adjustable motor base, hinged to the rear of the bed, and is said to insure correct belt tension and alignment. A standard 5/16-inch bit is used, and the chucks are quick-adjusting, with replaceable, self-centering, non-scoring jaws in which the armature bearings run. The manufacturer claims that turning the commutator on its own bearing surface is the only way to insure a job without runout. A 1/6-or ½-hp motor is required, but is not furnished.

156

The Bussmann Manufacturing Company, St. Louis, Missouri, is featuring the Buss display stand assortment on auto and radio fuses. Advantages claimed for this assortment stand are that it reads from either side, can be used in an island display, window, or counter, or can be hung on the wall. Its slide cover prevents theft losses, as the fuse stock is hidden from customers but is at the fingertips of the partsman. The No. 200 display stand assortment contains 200 fuses in 40 boxes.

(Continued on page 182)



"Any fool dog can walk on a wire!"

MO

PACKARD 4 AAO
U.S.A. PACKARD 440
U.S.A. V.S.A.

THE JOBBER WHO CARRIES

CKARD

IS A JOBBER WHO RECOGNIZES QUALITY

Because Packard cable is our only product in the automotive field, you can be sure that its quality is the sole factor influencing a jobber to stock it. For quality is the sole basis on which Packard cable is offered to jobbers . . . there are no tie-in sales, no package

deals, to sway his judgment. The fact is, Packard cable on a jobber's shelves is a sure indication that he stocks high-quality products—not only cable, but other merchandise as well. In short, to pick a jobber, look for Packard Cable on his shelves.

YOU'RE RIGHT WITH

PACKARD ELECTRIC DIVISION

PACKARD ELECTRIC DIVISION
GENERAL MOTORS CORPORATION
WARREN, OHIO

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING

MOTOR AGE, January, 1949

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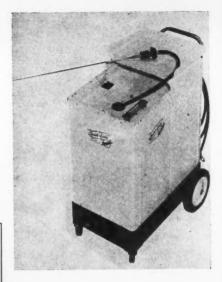
For Further Information Use Coupon on Page 82

157

The Bonney Forge and Tool Works. Allentown, Pa., announces a new reversible ratchet. It is claimed that this tool offers the mechanic a ratchet with fine tooth action but with the strength of coarse teeth. It combines the advantages of both a free-wheeling type and a tooth type ratchet. Extremely free movement achieved with this new principle results in practically no drag in reverse-in other

words, the mechanic does not have to hold the socket with one hand to prevent its being dragged backwards when ratcheting.

The Quick Charge Company, Oklahoma City, Oklahoma, has developed the Quick-Lube Portable Oil-Changer. This unit is designed to remove the old oil and sludge in a few minutes without having to get under the car.



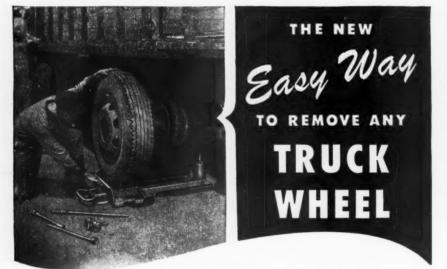
The dip stick is removed from the crankcase, the vacuum tube is inserted into the dip stick hole, the connections are made, and the switch of the Quick Lube is turned on. The manufacturer states that it requires but a few minutes to drain the crankcase.

The DeLuxe Products Corporation, LaPort, Indiana, is marketing its De-Luxe "Clear-Ex," a device designed to supply air to the exhaust manifold and thus dilute the volume of burned gases going back into the intake mixture. Advantages claimed for the use of the "Clear-Ex" are, improved en-gine performance, cooler valves, longer spark plug life and cleaner oil.

160

The AP Parts Corporation, Toledo, Ohio, is featuring Miracle Power and dgf-123, which use colloidal synthetic graphite as their basic ingredient. Miracle Power is for adding to both oil and gasoline, while dgf-123 is used in conjunction with a special applicator kit, in lubricating parts before assembling. assembling.

(Continued on page 184)



Size makes no difference to a DRUM SAFETY JACK. With a DRUM SAFETY JACK, you never crawl under the truck -you never lift heavy wheels. The DRUM SAFETY JACK does all the heavy work.

Works equally well on front or rear-single or tandem-on over-axle or under-axle suspensions. Cuts down time on tire changes, wheel packs and brake jobs. Get a DRUM SAFETY JACK now-or send for descriptive folder and name of nearest jobber.

THE DRUM SAFET



3781 East 77th Street • Cleveland 5, Ohio



"I'd say we were just about under the zoo!"

No use crying over spilled milk . . .

If you missed the Houdaille Band Wagon... if your sales and profits last year were shy the many extra dollars that Houdaille could have brought you... there's no use crying. What's gone is gone!

but don't let it happen again...
SAVE THE MILK...ENJOY THE CREAM...
SELL HOUDAILLE* IN 1949



For maximum profits
SELL BOTH!

HOUDAILLE Rotary SHOCK ABSORBERS

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, 1949

Brand New... Not Rebuilt... original equipment units for the service needs of Ford (1928-1948), Mercury (1939-1948), Lincoln (1936-1948), Studebaker (1938-1949).



HOUDAILLE Direct Acting SHOCK ABSORBERS

Fewer numbers and smaller inventories cover the service needs of practically all cars originally equipped with shock absorbers of this type during the last twelve years.



*Say: "Hoo-Dye"

There's rich cream in the extra sales and extra profits which will come to you as a Houdaille distributor. For eight out of ten cars more than one year old definitely need new shock absorbers. Nearly every sale moves four units and produces both a merchandise and labor profit. Think of the tinkling in your till if you sell only a small portion of those you serve.

And Houdaille is ready to help you sell them...ready with display stands to hold your stock, counter cards, station banners, permanent signs, decals and many other helps to turn callers into customers.

Decide now to sell Houdaille this year and crow...not cry...when 1950 rolls around. Call your nearest warehouse or service distributor today. Or write for

your copy of Houdaille's interesting booklet, "You'll Be Sitting On Top of the World with the Top Twelve."

HOUDAILLE-HERSHEY CORPORATION
HOUDE ENGINEERING DIVISION
BUFFALO IL NEW YORK

America's Proneer Builder of Nydroulie Shock Absorbers

For Further Information Use Coupon on Page 82

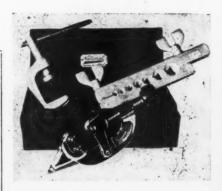
The Automotive and Marine Products Corporation, Boston, Mass., has developed the Ampco Vapor Lubricator, a unit which injects a spray of cator, a unit which injects a spray of top cylinder oil into the intake mani-fold. This lubricator is designed to continuously clean, lubricate, and pro-tect all vital moving parts in the heat-friction-wear zone of the engine. The Ampco Lubricator operates entirely by atmospheric pressure and through the vacuum created in the intake manifold. There are no moving parts in the unit. A fine, steady oil spray is dispersed with the fuel supply the instant gasoline passes from the carburetor to the combustion chamber. According to the manufacturer, the steady spray of lubricant into the upper cylinder section dissolves engine varnish and gasoline gum, clears out carbon and combustion residues with every exhaust stroke, and valves, pistons, and cylinder surfaces are lubricated for improved efficiency.

162

The National Machine and Tool Co.. Inc., Jackson, Mich., is featuring its sleeve puller for use on truck and tractor engine jobs. The manufacturer states that this tool makes it possible for one man to remove sleeves on most trucks and tractors. 33 adaptors are available for use with the tool, thus

making it practically universal.

Another product being featured by National is the tube cutter and flaring tool. The cutter and tool are both capable of handling tubing from 1/8



inch to 1 inch, and are housed in a metal box as a set. An unusual feature of the tube cutter is that it has a grooved roller which makes it possible to cut the flare off the end of a piece of tubing close to the point at which it widens out, rather than to slide the tubing all the way through the cutter, wasting part of the tubing.

163

The National System of Garage Ventilation, Decatur, Illinois, now features the Underfloor System for removing exhaust fumes from their source. Except for the flexible pipe from the tail pipe to the connection on the floor, all parts of this system are underground. The steel ducts, which are encased in concrete, are designed to last the life of the building. A large capacity blower is also incorporated for removal of the gases.

164

The Service Supply Company, Denver, Colorado, has announced the development of a new cooling system cleaner, to be manufactured and sold under the name RE-MO. This product is packaged in a double-section container. One section contains an acid-base compound designed to cut grease, scale, alkali, and rust deposits. and the other section contains a neutralizer to restore cooling systems to a non-acid condition.

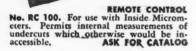
165

Moto-Vim Sales, Oak Park, Ill., has introduced a chemical tune-up penetrant, "Moto-Vim." The maker claims that "Moto-Vim" increases compressional transfer of the compression of the com sion, removes carbon, releases sticky valves and stops oil pumping if cylinders are not egg shaped. "Moto-Vim" is said to be especially adaptable to cleaning generators, starters and electric motors.

(Continued on page 186)

MOT







MAIN JOURNAL MICROMETER No. 510 MBM. Range 0 to 5". Furnished with standard. For measuring crankshaft journal diameter without removing crankshaft from engine. Also useful for measuring many other parts in the automotive shop.

ASK FOR CATALOG



INSIDE MICROMETERS and 11/2" to 12".



CONNECTING ROD JOURNAL MICROMETER No. 350 RL. Range 1½" to 2½". Furnished with ratchet, locknut and 2" standard. Graduations on under side of barrel facilitate reading dimensions when tool is in measuring position.

ASK FOR CATALOG

THE CENTRAL TOOL COMPANY

462 WELLINGTON AVENUE CRANSTON 10, RHODE ISLAND



Largest Selling Micrometers in the Automotive Field, throughout the World.



MOTOR AGE, January, 1949

For Further Information Use Coupon on Page 82

166

Garry Laboratories, Inc., Buffalo, New York, has developed a new Rustpruf Radiator Cleaner. Advantages claimed for this product are that it stops overheating by disintegrating rust and opening radiator tubes, does not have to be neutralized or flushed out, is harmless to all parts of the cooling system, and works with any type of anti-freeze. The manufacturer states that this is also a rust inhibitor.

187

Miller Rubber Company, a division of the B. F. Goodrich Co., Akron, Ohio, has placed a new automobile floor mat on the market. Called the "Miller Auto Storm Mat," it is designed to protect the original carpeting. Also included in the Miller line is the Miller Universal curved radiator hose. The feature of this product is a red marking tape that runs the length of the hose, and is marked off with letters and numbers. This



enables the mechanic to cut off the correct size for 77 per cent of the cars with only stocking four sizes of the hose. A third product featured by Miller is the Miller Imperial Low Pressure Passenger Car Tire.

168

The Noblitt-Sparks Industries, Inc., Columbus, Indiana, in promoting sales of its fall line of automotive heaters, has designed a three panel display piece. The manufacturer states that it is suitable for counter, window or shelf use and is accompanied by window streamers and handout folders. The dimensions are 21½ in. x 31½ in., and is produced in three colors.

169

The International Chain & Manufacturing Company, York, Pa., announce the new packaging for tire chains. The color of the box indicates the type of tire chain, and tells whether the carton contains tire chains or cross chains. The Campbell line of truck chains is now packaged in bags. The color indicates grade, and the number of bands indicates the type of chain.

(Continued on page 188)



"Here! Here! My good man, I said!" want my car painted, not papered!"



THE GATKE GROOVES

Eliminate dirt, dust and extraneous matter for uniform braking contact.

Quickly restore the efficiency of wet brakes.

Induce air cooling.

Avoid wear of brake lining and drum ordinarily caused by dirt and grit. You win new customers and please old customers better with GATKE Grooved Wire Back Brake Lining Sets.

The grooves attract attention and excite interest that helps capture brake reline jobs. What's more, the grooves give extra performance that costs nothing extra; smooth non-grabbing action, quiet operation and increased driving comfort that makes your customers tell others.

Ask your GATKE Jobber or write.



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Put Yourself



in the shock absorber sales picture this winter!

▶ Icy streets are extra hazardous if shock absorbers are worn out. And thousands of cars are heading into winter in that condition. They bounce and buck—are prone to skid.

The owners don't know what the trouble is. It's up to you to tell them—and sell them on restoring safety and comfort for winter driving with new, direct-acting Briggs Shock Absorbers.

It's easy to cash in on this rich and ready market. Simply check shocks regularly—for leaks, for air pockets. Any sign of oil on the cylinder indicates a leak.

By detaching the lower end of the shock, and working the cylinder in and out, you can easily feel air pockets. In either case, the shocks

are worn out. Replace them with rugged Briggs Shock Absorbers—quickly available from your NAPA Jobber—for cars of all makes.

THE BRIGGS SHOCK ABSORBER COMPANY - CLEVELAND 3, OHIO

for the ride of your lifefor the life of your car"

BRIGGS SHOCK ABSORBERS

MOTOR AGE, January, 1949

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For Further Information Use Coupon on Page 82

The Autopulse Corporation, Ludington, Michigan, continue to feature their Autopulse Electric Fuel Pump. The manufacturer claims a number of advantages for this product. It is of advantages for this product. It is stated that they can be used on any type of car or truck, they save fuel by delivering only as needed and at a constant pressure, can be used with any type of fuel, are not affected by temperature, eliminate the necessity for unnecessarily rich mixtures, provide ample power for heavy grades, may be used alone or as a standby unit, eliminates ragged acceleration after idling, and have a simplified installation.

171

The Sparks-Withington Company, Jackson, Michigan, is featuring two new products—the Sparton Tornado, an electric air horn, and the Retriever, a trailer pick-up for bringing in dis-

abled cars. The Tornado is a twin trumpet horn, chrome plated brass, which can be mounted inside or outside. A special display board is available with the purchase of four horns. The Retriever is a two wheel trailer vehicle engineered to pick up automobiles and light trucks by either and tow them in for service or repair. This trailer is so designed that it can be hooked up behind a passenger car. It lifts the customer's car by means of power applied to the under carriage of the car from the knee.

172

The Pyrene Manufacturing Com-pany, Newark, New Jersey, is featuring two packaged assortments of fire ing two packaged assortments of fire extinguishers currently being offered to dealers in the automotive field. In one, there are three pint size vaporizing liquid extinguishers, two of them chrome plated and one brass, all complete with liquid charge and bracket. Display, circulars, and window streamers complete this package. dow streamers complete this package. dow streamers complete this package. The second deal includes three quart size vaporizing liquid extinguishers, two chrome and one brass, complete with charge and bracket. Also included are two quart cans of extinguisher liquid for refill purposes and various selling aids such as display and circulars and circulars.

The Arco Company, Cleveland, Ohio, is marketing a new color machine and a new combination gallon-quart paint mixing machine. These machines have been especially designed to meet the need of car refinishing shops and paint jobbers for equipment which will enable them to fill the full range of demands for refinish paints.

174

The Watervliet Tool Co., Albany, N. Y., announces a small "Handy-Sander" and featheredging tool designed to reach difficult inaccessible places for both grinding and feather-decise. edging. The manufacturer states that its construction is light, so that it can be used for extended periods without tiring the operator.

175

The Mansfield Rubber Company, Mansfield, Ohio, is announcing the Mansfield Lo-Temp tire, constructed of cold rubber. In producing this new rubber the process is carried out with special equipment in which the latex is refrigerated to 41 degrees instead of the 122 degrees temperature in use of the 122 degrees temperature in use throughout the industry up to the present time. It is claimed that this cold rubber is tougher, wears longer, and resists tread cracking.

(Continued on page 190)

M(

CAR DEALERS AND GARAGES



TWO DOOR SAFETY ON ALL FOUR DOOR SEDANS



IT'S INVISIBLE **AUTOMATIC EASILY INSTALLED**

PROTECTS FROM

- SERIOUS OR FATAL ACCIDENTS CAUSED BY OPENING REAR CAR DOORS
 - SNEAK ENTRIES AT LONELY INTERSECTIONS
 - REAR DOORS MISTAKENLY LEFT UNLOCKED
 - FROM PASSENGERS LEAVING
 A MOVING CAR

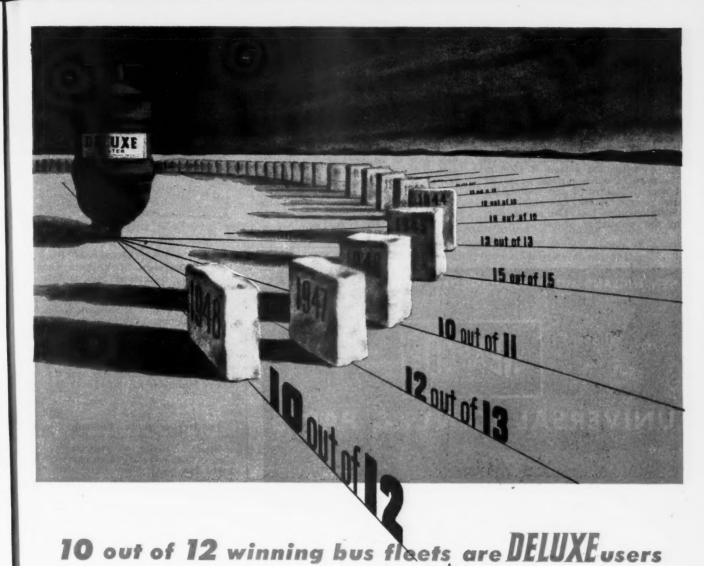
DEALER AND DISTRIBUTOR TERRITORY OPEN

HALL PRODUCTS, INC., 812-24 S. LOGAN ST., MISHAWAKA, INDIANA, U.S.A. (ORIGINAL MANUFACTURERS)

DEALER	
DISTRIBUTOR	

We are interested in the Dickson Safety Lock. Please send us complete information.

NAME	***************************************
ADDRESS	***************************************
CITY, ZONE, STATE	





These are the winners in the 1948 National Bus Transportation Awards:

St. Louis Public Service Company, St. Louis, Mo.

Capital Transit Company, Washington, D.C.

The Connecticut Company, New Haven Conn.

Atlantic Greyhound Corporation, Charleston,

West Virginia San Antonio Transit Company, San Antonio, Texas

Teche Greyhound Lines, New Orleans, Louisiana

Harrisburg Railways Company, Harrisburg, Pa.

Boston, Worcester & New York Street Railway Co., Framingham, Mass.

Charleston Transit Company, Charleston, West Virginia

Johnson Bus Lines, Inc., Milford, Mass.

St. Joseph Light & Power Company, St. Joseph, Mo.

The Bristol Traction Company, Bristol, Conn.

⁸ The 10 out of 12 fleets starred are all or partially DeLuxe equipped.

Again! DELUXE is the first choice of men who know their filters best!

Not only one year . . or two years . . . but every year, by an overwhelming majority, the winners of the National

Bus Transportation Awards are DeLuxe Users. There must be a reason for such continued and predominating preference by the men

who check filter costs and performance most closely. The reason is-DeLuxe Advantages and Improvements, not found in any other filter.

For instance, DeLuxe Cartridges have the Spring and Cone construction shown here; the supporting inner spring that won't sag and quickly become useless PLUS the inner metal cone that feeds oil the L-O-N-G way for thorough cleansing.

To get this actual cleansing effect you must have BOTH-this better cartridge INSIDE and the DeLuxe Filter OUTSIDE with its many advantages, such as the new Sedi-Sump.

DELUXE-BALDWIN CARTRIDGE

Now, the New DeLuxe-Baldwin Cartridge makes available to all popular makes of filters, the unique DeLuxe thorough cleansing effect. This means that every car, truck bus, or tractor equipped with a cartridge-type filter is a DeLuxe Sales Opportunity! Take advantage of these new EXTRA profits, now.

DELUXE PRODUCTS CORPORATION, 1404 Lake Street, LaPorte, Indiana



R-3076

MOTOR AGE, January, 1949

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For Further Information Use Coupon on Page 82

176

The Sunnen Products Company, St. Louis, Missouri, has announced the new DC-120 "C" type valve lifter which is designed for use in trucks and the passenger car field. The lifter, and the passenger car held. The litter, constructed with a tubular frame, is said to withstand a load of 1000 lb. The jaws fit valve springs up to 2". A special feature of this tool is the jaw release screw for safely and slowly lowering the valve spring during the installation of valves.

177

The Cardinal Corporation, St. Paul. Minn., is introducing a portable shop crane that can also mount on the floor

of a truck body.
Called the "Hydro-Lift," the crane has 2000 lb. capacity and a double-acting hydraulic pump for speed. It serves to lift engines and heavy stock. It is claimed that the load can be held at any height and the 45 inch boom length can be equipped with an 18 inch extension arm if desired.



178

The American Hammered Piston Ring Department of Koppers Company, Inc., Baltimore, Md., is introducing a piston ring set, engineered around a top compression ring made of their new metal, K-Spun. K-Spun is a development of Koppers, and is used in centrifugally cast rings. The new metal won't break during installation or in service, according to the tion or in service, according to the manufacturer, and has 50 per cent more "spring" quality and four times the resistance to combustion shock.

179

The Dayton Rubber Company, Dayton, Ohio, is featuring their "Carry-A-Spare" V-Belts, an assortment designed to sell motorists on carrying a spare fan belt. They have also announced a line of new radiator hose in easy-to-stock assortments.

IRO

Hershey Metal Products, Inc., Derby, Connecticut, announces the addition of Ford, Mercury, and Lincoln knee action parts for all 1949 cars. According to the manufacturer, these new parts complete a line for the replacement field.

(Continued on page 192)



"Stranded on Route sixty-six? O.K.-Am sending ten gallons out to you immediately!"



MO



SPECIALLY DETREX Products AUTOMOTIVE & AVIATION

DETREX CORPORATION, leader in scientific soil-removal, has a complete line of cleaning equipment and chemicals—developed specially for the automotive and aviation service field. Each of these products has behind it a quarter-century of experience in meeting the exacting demands of the manufacturing industries . . . and all have been thoroughly proven in service.



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O.K.to you

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DREX-FOAM

A sudsing detergent for cleaning cars, aircraft, busses, etc. inside and out. Lifts dirt off without scouring; rinses clean. Safe for finest materials and finishes.



LIQUID PAINT MASK

Replaces tedious and costly masking methods. Quickly applied by brush or spray gun and removed by washing or peeling.





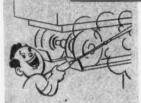
Removes heavy grease, oil and dirt with exceptional speed and economy.



SOAK CLEANING

Tanks and chemicals for removing heavy deposits of grease, oil and road dirt. Safe and thorough.

STEAM-CLEANING COMPOUNDS



Used with steam guns for rapid removal of heavily caked grease and dirt. Will not allow scale build-up in coils even with hardest water.



RADIATOR CLEANER & STRIPPER

Removes all oil, grease and paint, leaving a perfect surface for repairing core.

PARTS CLEANING



Compounds and equipment for rapid, cold cleaning of all kinds of metals and parts.



DEGREASERS

Clean metal parts in nonflammable Detrex safety solvent, 5 to 10 times faster than other methods. Leave all surfaces perfectly clean and dry. Hand-operated; compact; economical, safe and easy to use.

GUARANTEED PERFORMANCE—All Detrex products are sold on a guaranteed-performance basis for thorough testing in your own shop. Write for descriptive bulletins—or call your local distributor.





AUTOMOTIVE & AVIATION SERVICE DIVISION

For Further Information Use Coupon on Page 82

IRI

The Radiator Special Company, of Charlotte, North Carolina, has two new products to be offered to the automotive field. The first of these is their Gas Line Auti-Freeze which is designed to prevent frozen fuel systems, and also removes gum accumulations and acts as an upper cylinder lubricant. Their second product is Liquid Block Seal, which, when poured into the cooling system, is said to repair cracked blocks in thirty minutes.

The manufacturer states that the product makes a metalloid seal which will resist the same temperatures and pressures that the block itself will withstand.

182

The Heet Division of DeMert & Dougherty, Inc., Chicago, Illinois, is marketing Heet, a product for absorbing moisture in the fuel system. The manufacturer states that this product will prevent starting difficulty due to

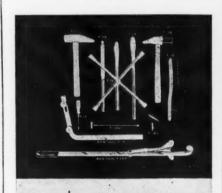
frozen gas lines, keeps the fuel line clean, improves pick up, and reduces the drain on the battery. It is claimed that by adding a can of Heet to a tank of gasoline the engine performance is improved, and it is also stated that this product cannot harm the engine.

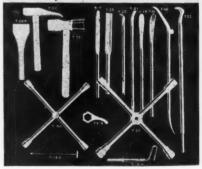
183

The Brunner Manufacturing Company, Utica, New York, has added a 15 horsepower two stage compressor to its line. Features claimed for this compressor are a sealed cast iron crankcase, cast iron cylinders and heads, compressor cooled by blast of air from bladed flywheel, counterbalanced crankshaft, replaceable main and rod bearings, suction and discharge valves in one plate for easy replacement, cast iron pistons with three rings, extended surface intercooler and aftercooler with finned copper tubing, and silent operation.

184

The Ken Tool Manufacturing Company, Akron, Ohio, is manufacturing three new tools for tire removal work. The T-451 Passenger Tire Tool Set





comes complete with 12 tools for changing passenger car tires. The T-452 Tire Tool Set contains 16 tools for changing truck tires. The T-66 is a hub cap removing tool which removes and holds the hub cap to prevent dropping and denting it.

185

The K-D Car Hanger Company, Richmond, California, is manufacturing a clothes hanger for automobiles which is said not to interfere with the action of the windows or doors. The manufacturer states that it is adjustable to any size window and is capable of holding several hangers. An elastic strap attaches to the door to hold the clothes in place.

(Continued on page 196)

ASK YOUR JOBBER ABOUT TRAINOR SPRINGS



Years and years of spring making experience is your guarantee for the best in chassis springs. Order the TRAINOR ALL-STEEL line of Helper Springs for easiest installation and highest profit margin.

TRAINOR NATIONAL SPRING COMPANY New Castle, Indiana

Branches

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100% COMPLETE Service BEARING LINE!

The 100% complete line, almost 7,000 items, everything for your engine bearing needs is available at your Federal-Mogul Jobber today, tomorrow... when you need it! A complete line, readily available, over

the years has made the Federal-Mogul line the One-Call line—just one call for all your engine bearing needs, from the real old timers to the most modern popular numbers!

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Engine Bearings • Bushings • Connecting Rod Exchange • Reconditioned Connecting Rods • Rebabbitted Connecting Rods



 Connecting Rod Bolts and Nuts
 V-Seam Piston Pin Bushings
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MOST ADVANCED LINE CHARGERS IN THE

FOX POWERCHARGER MODEL G

A complete portable fast-and-slow charger, the only one of its type available today. Can be easily carried to the battery for fast charges and quick starts, or used on a bench for slow charging. It has all the necessary controls for the charging process and incorporates the new, exclusive FOX charging circuits. No other charger can match its versatility, its safety and dependability, and its small size and weight of only 281/2 pounds.

For FAST CHARGING the Powercharger has a dependable electric time switch, a charge control for adjustment of the charging rate, a rugged waterproof ammeter and a protective overload breaker.

For SLOW CHARGING the time switch is automatically disconnected and the fan motor slowed, the overload breaker is connected as well as the

charge control so that you can adjust the charge rate to suit one or several batteries for a convenient time, usually 12 or 24 hours.

Output 75 amperes at 7.25 volts. Available for various power supplies. All wire connectors, and parts are chosen to meet the exacting requirements of the Underwriters' Laboratory.

FIX PRODUCTS COMPANY, PI

Chargers Today

OF BATTERY INDUSTRY

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This model was developed to meet the growing demand for a charger that will handle 12-volt truck and bus batteries as well as 6-volt automobile batteries.

Conventional fast chargers can only charge one 6-volt battery or half of a 12-volt battery at a time. The FOX 6-12 can charge both halves of a 12-volt battery at the same time. The fast charging current on 12-volt batteries is a full 50 amperes, and because it is charging all the battery at a maximum efficiency it can fast charge the battery further within an hour than a conventional 6-volt, 100 ampere charger.

Output on a 6-volt battery is 80 amperes. Underwriters' Laboratory approval guarantees safe, high quality design and construction. Available for various power supplies.



TOTAL SOURCE SUPPLIES.

80 DELUXE

MODEL-F

The FOX 80 DeLuxe is something new in battery chargers. A streamlined Lo-Boy cabinet containing complete battery testing and fast charging facilities, together with the new and versatile slow charging circuit.

The FOX 80 has three accurate voltmeters for battery testing instead of one for an overall check of all three cells as in many chargers.

The 80 can fast charge at rates up to a full 80 amperes. At these rates, a lot of charge can safely and effectively be delivered in a short time, normally 60% to 70% within an hour, without removing the battery from the car.

The Model F is fully approved by the Underwriters' Laboratory and available for various power supplies.

The ultimate in battery chargers. A Super DeLuxe 100 Ampere fast charger in a stylish sturdy cabinet with set-in wheels, a built-in cable compartment and easily removable side panels. In this cabinet the best in battery charging and testing equipment.

A FOX LoTemp transformer and copper sulphide rectifier are the main components of the charging system. Their output is carefully regulated with a synchronous electric time switch and a charge rate control adjustment. The charging current is indicated on a sturdy waterproof ammeter.

The battery testing is done with three separate voltmeters so that a defective battery cell is quickly located. The battery condition is checked during a HiRate timer controlled discharge. A red pilot light shows when the unit is discharging, a green pilot light when it is charging.

High quality, sturdy, components are used throughout. Output 8.5 volts at 100 amperes. Weight 171 lbs. net. Available for various power supplies.



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For Further Information Use Coupon on Page 82

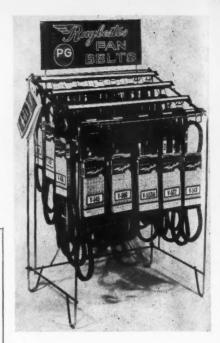
186

The Joseph Dixon Crucible Company, Jersey City, New Jersey, is featuring four types of plating lubricants for use in eliminating squeaks and carnoises. These graphite plating lubricants are obtainable in four forms: powder, stick, oil, and grease. The manufacturer states that with dry powdered graphite one mechanically deposits a sleek lubricant plating on the material. On most materials this type of plating is fairly permanent

and is highly heat resisting as well as cold resisting and insoluble.

187

The United States Asbestos Division of Raybestos-Manhattan, Inc., Manheim, Pa., announce the Grey Rock Fan Belt "Sales-Builder" featuring a floor type display rack. Known as the No. FB-50 it carries an assortment of 50 belts—each on its own individual hook—in 26 numbers and will service 90 per cent of the cars and light trucks



on the road today. The arrangement of the belts on the display rack is such that each belt number is readily identified and removed without interfering with any other belts on the rack. The rack is of light wire and metal construction.

188

Storm-Vulcan Company, Dallas, Texas, has announced the new Model 15 crankshaft grinder. Features of this grinder are spring load center, which insures "out-of-round" grinding; quick retraction lever which is directly in front of the operator, designed to lessen the operator fatigue; eye-level feed dial, also in front of the operator, said to simplify grinding wheel feed-up; and new adjustable throw heads, which enable the operator to center the journals without removing throw head or crankshaft.

(Continued on page 198)



SPARK PLUG CLEANING and TESTING EQUIPMENT

It is now well known and demonstrated that VIXEN Spark Plug Cleaners and VIXEN Spark Plug Testers are alone in their own field, and moving fast into all fields of spark plug service equipment selection. VIXEN Spark Plug Cleaners and Testers are proved products whose qualities of performance have nothing to do with price, simply because price cannot buy them elsewhere. THOUSANDS IN SERVICE.

See your jobber or write for bulletin A-48 for details.

EDMUND J. WUDEL 6422 S. CENTRAL AVENUE LOS ANGELES 1, CALIF., U.S.A.



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CAR BY-CAR

CHEVROLET

Ford PLYMOUTH

IS A CUSTOMER FOR THIS NEW "BY-CAR" FUSE SERVICE







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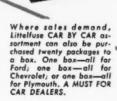
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The "Big 3" CAR BY CAR assortment of 20 packages of 5 required fuses each, is available in the following breakdown: 7 packages for Ford, 7 packages for Chevrolet, and 6 packages for Plymouth. HOT FOR SERVICE STATIONS!

- NEW "BY-CAR" FUSE SERVICE . . . With the new LITTELFUSE packaging idea, every car a market now!
- NEW SALES . . . You can sell a set to every one of your Chevrolet-Ford -Plymouth customers before it becomes an emergency.
- NEW KNOW-HOW . . . Here's how: LITTELFUSE—and LITTELFUSE alone-is packaging every fuse used in a Chevrolet in one package! The same for Ford and Plymouth.
- NEW TURN-OVER . . . you sell the whole set instead of just one-and sell it the next time the car comes innot just when they come in with a fuse blown!
- NEW CONVENIENCE . . . Each package of five is printed with a fuse application chart for the car the fuses service. It's sensational. Nothing like it for service convenience and IN-**CREASED SALES!**



4785 NORTH RAVENSWOOD



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CHICAGO 40, ILLINOIS

NITE-T-LITE . SWITCH-LITE . IGNITION-FRITZ . NEON INDICATORS . SWITCHES . CIRCUIT BREAKERS . FUSES.







For Further Information Use Coupon on Page 82

189

The Motor Generator Corporation, a Division of Hobart Brothers Company, Troy, Ohio, is now marketing five new models of its Two-Stage Air Compressors. These compressors are available in 7, 9, 13, and 21 cubic foot capacities and are furnished with 80 gallon storage tanks. The compressors are of the self-contained type with motor and compressor mounted on a one piece subbase which in turn is welded to the air receiver. The power transmission direct from the motor by multiple "V" belts with slack take-up provided. The air pressure is automatically con-

190

The Willard Storage Battery Company, Cleveland, Ohio, announces a 28 lb. portable battery charger. This

charger, which can be moved to the location of the disabled car, and is able to charge the battery sufficiently to get it back into service, can be used well for slow charges in the shop, with currents ranging from 6 amps to 75 amps. The manufacturer points out that this charger is not to be compared with the Willard fast charger tester.

191

The American Grease Stick Company, Muskegon, Michigan, has designed a new product called Lock-Ease. This is a penetrating fluid which is designed to creep into the lock mechanism and, after application, to evaporate leaving a graphited film. Lock-Ease, which contains a special rust inhibitor, is said to provide protection against freezing, sticking, rust, or wear. The manufacturer states that it is unaffected by extreme heat or cold.

192

The Marquette Mfg. Company, Minneapolis, Minn., has announced a new power crane, model 141 N. This crane is a completely self-contained unit designed to fit all trucks. Incorporated in the unit is a three horsepower gasoline engine which furnishes the power in a 576 to 1 lifting ratio. This engine is air cooled, has a Zenith float feed carburetor, and a kick starter. The crane has a full swivel boom head, a floating disc type clutch, and a double planetary gear reduction.

The Division Lead Company, Chicago, Illinois, is now providing snap-on metal covers with the 1 lb. spools on Divco Solder. The manufacturer, which continues to feature the nonliquid Flux, has designed the cover to protect the solder when carrying in a tool box or when it is subject to rough handling.

(Continued on page 200)

MC



WARCO Windshield Cleaner Warco Replacement Universal Joint Boots

WARCO Gasket Cement

WARCO Knee Action and Shock Oil No. 100

Seal

Seal

Ask your jobber or write us. WARWICK LABORATORIES COMPANY

334-42 Cleveland Street

FLUID

Warwick Laboratories Co Brooklyn N.Y

MADE IN UNITED STATES OF AMERICA

Brooklyn, N. Y.

WARCO "K.O." Karb WARCO Jack WARCO General Purpose Oil

WARCO Mo-Tun-Up WARCO Radiator Flush

WARCO Rube-A-Lube

WARCO Penetrant





WARCO Liquid Radiator

WARCO Liquid Engine

WARCO Jack Oil

How to give Wrinkled Fenders that New Car Complexion!



... So there she was . . . first time hubby let her have the car . . . and she had a fender looking like an ad for a new permanent wave. Could we fix it . . . but fast? I said sure, because that's just what our Milwaukee Quality Tools are built to do.



Photos Courtesy Edwards Motor Co., Milwankee, Wis.



First, we put our Milwaukee FENDER HAMMER to work ironed out those wrinkles faster, smoother than a pants - presser at the Waldorf on a Saturday nite.



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Next we got our big powerful Milwaukee DISC SANDER on the job, smoothing out all the little kinks and bumps—getting the damaged surlace O.K. for final sanding.



Finish sanding and perfect feather-edging was done with the new Milwaukee PNEUMATIC SAND-ALL... the sander that puts a real satin-hnish on metal, makes it easier to paint.



Finally, after painting, we gave it a fast going-over with our Milwaukee ELECTRIC POLISHER and the new Milwaukee MOTO-POLISH—Result: a really new car look!



Yes, sir, Mr. Repairman, if you're looking for the fastest-working, light-weight, rugged tools for all kinds of fender and body work—you'll be time and money ahead to find out about Milwaukee Quality Tools. See how from start to finish they're designed to do bonus jobs every time. A post card will bring you complete information—or a phone call to your nearest jobber will get you a full demonstration. MILWAUKEE ELECTRIC TOOL CORP., 5330 W. State Street, Milwaukee 8, Wis.



MOTOR AGE, January, 1949

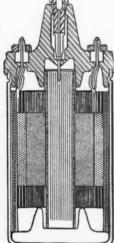
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When you use P&D products you can be sure you're giving your customers top performance. Genuine P&D parts are manufactured completely in the modern P&D plant - from raw materials to finished products. Long experience in automotive engineering combined with skilled workmanship assures you of the best products you can get.

Take the P&D coil, for example. Notice how the combination high tension terminal for both screw and plug type connections (a solid brass insert) is molded into the cap to assure a moisture-proof connection. Then notice the patented one-piece (seamless) air cooled container - ribbed to give ample surface to dissipate heat. Our exclusive Perma-Sealing method of locking the plastic top to the container makes for an absolutely moistureproof seal.

Write today for your free copy of Catalog No. 49 giving full information about P&D condensers, contacts, switches, Turn Out Better relays, etc. - the one complete line of quality starting, lighting and ignition products for all automobiles, trucks and buses.



Tune-up Jobs With PeeDee

MANUFACTURING COMPANY, INC.

LONG ISLAND CITY 5, N. Y.

Profit Opportunities

Continued from page 198

For Further Information Use Coupon on P. 82

The International Chain & Manufacturing Company, York, Penna., have announced the Campbell Tire Chain will now be packaged in metal edge boxes with identifying colors that indicate the type of chain, Highway Service or Lug Reinforced. The box design identifies the chains as tire chains or cross chains. In addition, the new Campbell Chain Applier is included with every pair of chains.

The Hein-Werner Corporation, Waukesha, Wis., is manufacturing the "Knuckle-Joint Hook" bumper lift jack. Operation is similar to previous



models, but the jack now has a metal link and hook device that will automatically assume the contour of the new curved type bumpers and compensate for normal arc as the car is lifted. The "Knuckle-Joint Hook" is interchangeable with the present V-120 lifting hook.

The Simoniz Company, Chicago, Illinois, has added to its line Simoniz Window Glaze, for cleaning glass and making it resistant to water spotting and finger marks. This window cleaner is claimed to clean glass faster and keep it bright longer. The manufacturer states that it can also be used for silverware, porcelain, plastics, chrome, and other metal surfaces.

The Belden Manufacturing Company, Chicago, Illinois, announces several new additions to its line for the coming year. These include a new assortment of spark plug wire sets, battery cables, and terminals, a new Belden Battery Cable Terminal Lifting Tool, and a new Belden Square No-Roll Spool.

(Continued on page 202)

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MOTOR AGE. January. 1949

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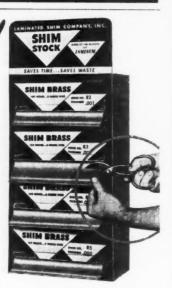
ANNOUNCING!

NEW WALL RACK FOR SHIM STOCK

Here's a new, sturdy, metal wall or bench rack which holds four cartons of rolled shim stock in gauges of **your own choice**. Twelve thicknesses from .001 to .012" available in brass or steel. No longer any need to buy a fixed assortment of gauges which might not be exactly the ones you want. This way your entire range of ordinary adjustments can be handled by one rack.

Each carton holds 6" by 100" of precisiongauge brass or steel. Ready for instant use without fumbling or waste. Packaged in handy dispensing cartons, it's easy to stock, easy to use, always protected. The rack will last indefinitely . . . the cartons of stock are easily replaced as used.

ASK your industrial or automotive distributor today about the Laminated Shim Company line of precision, packaged stock. You'll find that he has a complete stock to meet your needs.



Holds the four gauges YOU want. Simply pull out the desired length of stock and snip it off. It's HANDY . . SAVES WASTE!

LAMINATED SHIM COMPANY

INCORPORATED

GLENBROOK CONNECTICUT

Profit Opportunities

Continued from page 200

For Further Information Use Coupon on P. 82

198

Vaco Products Company, Chicago, Ill., is featuring its Vacombo Screw Driver Kit No. ZB50. Included in this kit are the Vaco Amberyl (Slo-Burn)



plastic handle, one 1/8 inch x 4 inch blade one 3/16 inch x 4 inch blade, one 1/4 inch x 5 inch blade, one 14 blade No. 1 Phillips x 4 inch, and one 24 blade No. 2 Phillips x 4 inch. Also available for this kit is a 6 inch extension. The set comes in a seven-section leatherette tool roll.

199

Executone, Inc., New York, N. Y., is marketing a new intercom circuit designed to make it possible to answer paged messages from high noise level areas. This circuit combines the operation of a trumpet type paging reproducer and two-way staff station for use in either intercom or sound systems. When the system is used to page a person in a noisy area, the message is reproduced at high volume. To reply, the person called depresses a lever on the nearest station.

200

The Perfection Gear Company, Harvey, Illinois, is marketing the complete line of automotive gear and replacement parts, including ring gears and pinions, clutch cover assemblies, timing gears, timing chains, transmission gears, differential cases and parts, flywheel gears, clutch plates, clutch forks and cylinder heads.

201

The LYK-NU Company, Inc., New York City, New York, has announced a lithographed metal display rack for the sale of their LYK-NU Kote-O-Wax. This rack, designed for floor or counter use, holds 18 pint cans and is provided free with the initial order of 3 cases of LYK-NU Kote-O-Wax. Advertising material and sales helps are included in the shipment.

(Continued on page 210)

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GET THE TOOLS **EVERY MECHANIC WANTS!**



Complete tool sets from 10 to 114 pieces are available at your dealers. See them today! Set illustrated has 45 most needed pieces with room in box for additional "Special Purpose" Duro-Chrome Tools.

..So well balanced and finished that it comes to hand as naturally as your fingers - and does things no other ratchet wrench ever did! When this handsome wrench reaches into a tight spot it takes hold with a satisfying grip and you get ACTION — action of the kind you've wanted but never got. Try this superb wrench at your Duro-Chrome Dealer's and you won't be without it!

DURO METAL PRODUCTS CO. 2649 No. Kildare Avenue, Chicago 39, Ill.

DURO-CHROME TOOLS The Mechanic's Best Friend

OVER 2 BILLION BUILT SINCE 1916

ALSO MAKERS OF DURO MACHINE TOOLS

MOTOR AGE, January, 1949

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"Doggone

Good Tools"

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The only perfect terminal-to-cable connection.

Not a crimp . . not soldered . . but a terrific high amperage electric weld that fuses terminal and cable into one solid conductor.

Exclusive on all Whitaker Insulated and Braided Battery Cable.

WHITAKER LABEL
Assures
Quality Cable



CABLE CORPORATION

Pioneers and Leaders in Automotive Cable Products Since 1920

KANSAS CITY, MO. ST. JOSEPH, MO PHILADELPHIA LOS ANGELES

FACTORY-ENGINEERED

PONTIAC PARTS

FOR INDEPENDENT REPAIRMEN

PARTIAL ENGINE ASSEMBLY

DIRECT
FROM THE
PRODUCTION LINE

Like-New Performance at a Saving in Work, in Time and in Money

When a Pontiac customer needs an engine overhaul, explain the advantages of a Pontiac Partial Engine Assembly.

Straight from the production line, with all of Pontiac's Engineering and Manufacturing quality, the Pontiac Partial Engine Assembly fits 1937-1947 sixes or eights. Includes cylinder block; pistons, pins and rings; connecting rods; valve and valve parts; camshaft and sprocket; crankshaft and sprocket; timing chain; timing sprocket and seal; oil pump; bearings—all new, not rebuilt.

Best of all, you can get a Pontiac Partial Engine Assembly at the right price—a price which gives you a normal profit and your customer many more thousands of miles of dependable transportation.

You'll find the Pontiac Partial Engine Assembly is the answer to a lot of your problems. In fact, it's like hiring an extra mechanic—factory trained to take care of your Pontiac engine overhaul jobs!



1-QUICK AVAILABILITY

Just phone and give your complete order. Your Pontiac dealer will assemble it fast and deliver it to you or have it ready for you to pick up. There's no need to maintain an expensive inventory of Pontiac Parts.

2-GENEROUS DISCOUNTS

Your Pontiac dealer offers you attractive net prices on Pontiac Factory-Engineered Parts. With Pontiac Parts you can always make a fair profit for yourself at a fair price to your customer.

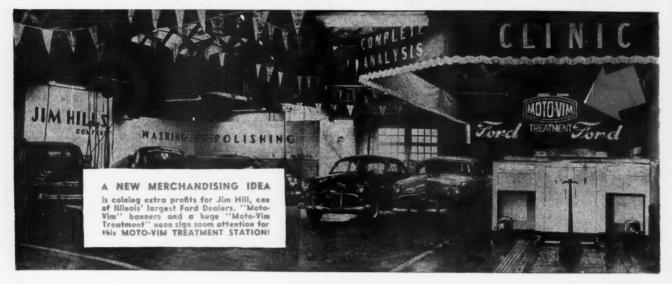
3—PRECISION FIT 5—FINE PERFORMANCE 4—OWNER SATISFACTION
6—FREE TECHNICAL INFORMATION



MEELES

uary, 1949

ADD A 'MOTO-VIM' DE



Big Dealer Boosts Business with This Amazina NEW CHEMICAL AND TUNE-UP PENETRANT

You, too, can cash in on a MOTO-VIM TREATMENT STATION—just as Jim Hill, big Ford dealer is doing! Moto-Vim offers remarkable and exclusive benefits and is going great guns among new car dealers, independent shops and service stations. Use it for scores of jobs—smooth out rough motors, zip up starting and performance, save oil and gas! Nothing else like it on the market. Write today!

OAK PARK, ILL. MOTO-VIM MFGR'S, INC., 11 LAKE STREET A FEW EXCLUSIVE DISTRIBUTORSHIPS STILL OPEN!



YOUR NAME ... YOUR BUSINESS ... YOUR REPUTATION

They're the most important business assets you have.

You can feature them most efficiently through a well-planned Direct Mail Advertising program, specifically designed for you to reach ALL your logical prospects and customers, identifying you. Participate in your factory-planned Direct Mail advertising programs!

Be sure you reach through Direct Mail Advertising ALL the prospects available in your territory. It pays . . . in sales, good will, and in "insurance" for future volume.

SERVING THE AUTOMOTIVE INDUSTRY FOR 28 YEARS

R.L. POLK AND COMPANY Direct Mail Advertising Division

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BIGGEST NAME IN SEAT COVER MATERIALS

TEXTILENE SUNSURE fibre fabrics are the Number One seat cover material for American motorists. They're advertised in big 2-color advertisements in the Saturday Evening Post. They're promoted with window, counter, and wall displays.

They're identified by labels on the fabric and on the carton.

TEXTILENE SUNSURE materials are available with special high-gloss vinyl-coated finish for longer wear . . . or with the new high-gloss lacquer finish.

TEXTILENE SUNSURE colors are specially processed to resist sunlight. Colors withstand 200 hours in the FADEOMETER machine without objectionable fading.

E. W. TWITCHELL, INC., Third & Somerset Streets, Philadelphia 33, Pa.

MANUFACTURERS—Send for 1949 sample book and for samples of the new high-gloss Textilene Sunsure materials.

JOBBERS—Write for the names of seat cover manufacturers near you who are now using TEXTILENE SUNSURE materials. Over 400 firms now use TEXTILENE SUNSURE.

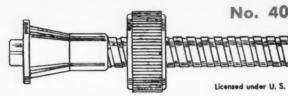


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ONLY 7 NUMBERS TO SERVICE THE FIELD

SPEEDOMETER CABLE AND CASING ASSEMBLY



No. 404

Licensed under U. S. Patent 1,649,310

A COMPLETE MATCHED UNIT

Champ-Items No. 404 Series of Speedometer Cable and Casing Assemblies, in seven sizes, fit all cars and trucks. Here's a bigger, better packaged service unit with accurate fittings that are designed to speed up speedometer servicing.

Each unit consists of a cable and casing with all tips and ferrules attached and assembled. It matches the longest shaft in its group and leaves a little slack on the shorter shafts. Champ-Items are time-savers — money-makers.



ORDER FROM YOUR JOBBER

CHAMP-ITEMS, INC.

6191 Maple Ave.

St. Louis, Mo.



Why Not Get the





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□ DEMONSTRATION

of Kelite Paint Lift for paint stripping.

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Company___

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With a world-wide reputation for quality, dependability and performance, NIEHOFF Products are a valuable asset to any electrical circuit.

They speed up installation, reduce maintenance, conserve fuel and improve motor performance. Each NIEHOFF Part is attractively packaged and plainly marked for quick, easy identification. A complete simplified catalog with a single code system for all makes of cars facilitates ordering, service and stock control.

Ask your Jobber for NIEHOFF Products TODAY.

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General Electric All-glass Headlamps give more light

-12% more light on the road...and they do not grow dim!



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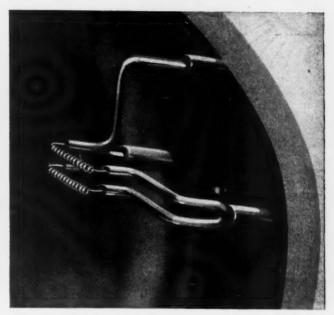
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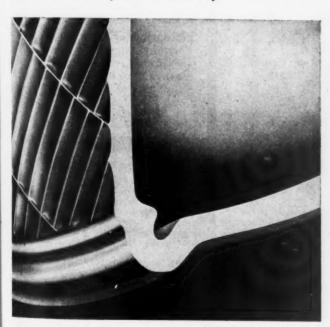
geles 15, 54th St.

nuary, 1949

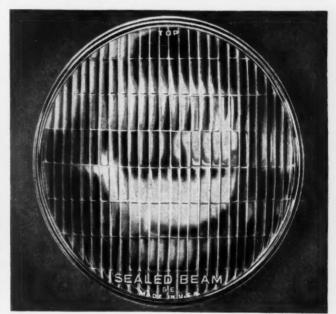
TODAY'S G-E "ALL-GLASS" sealed beam Headlamp is a rugged, one-piece bulb that gives more light than ever! This cutaway view shows why.



2. BIG, IMPROVED FILAMENTS give 12% more light on the road for driving, 16% more for passing. And they won't shake loose on bumpy roads.



3 THE ONE-PIECE, all-glass construction keeps out all light-dimming dirt and moisture. The average G-E headlamp gives 99% of original light output even at the end of its life. It does not grow dim!



THE LENS IS WEATHER-RESISTANT hard glass, precision made to put maximum light on the road. All these features add up to more light. That's why car owners and dealers prefer G-E headlamps. Stock and sell G-E!

G-E LAMPS

GENERAL (ELECTRIC

MOTOR AGE, January, 1949



TIRE REPAIR COATS IRON TIREMAN

You actually TRIPLE your profit on repair jobs... because you cut working time 2/3, with the Coats Iron Tireman. It ROLLS tires on or off the rim in just 30 seconds. Operator simply pushes down on the handle and WALKS AROUND THE TIRE. Patented ROLLERS do the work. Fastest, easiest, safest tire tool on the market.

ONLY COATS GIVES YOU ALL THESE ADVANTAGES

- Much lower price—way lower than less efficient machines.
- The only tire tool that handles ALL sizes of passenger car tires including air cushions and protective type tubes.
- Customers like it! Keeps tires out of grease, dirt and gravel.
- Protects tire, tube and rim. No pinching, bruising or denting.
- Requires only three feet working radius.
- All welded steel. No castings to break.

 Rosst VOLIE tire repair profits! WELLER

Boost YOUR tire repair profits! WRITE for free, illustrated literature today to Jack Hennessy Sales Co.

Also, there are Coats Tire Machines for Trucks and Tractors.



JOBBERS! DISTRIBUTORS!

Don't miss this opportunity. Your territory may still be open. Write for our proposition, Today.



Mfd. by COATS LOADERS AND STACKERS, INC.

Fort Dodge, Iowa

National Sales Distributor

JACK P. HENNESSY SALES CO. Dept. 30, P. O. Box 22, Audubon Station, New York 32, N. Y.

Profit Opportunities

Continued from page 202

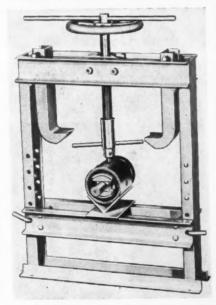
For Further Information Use Coupon on P. 82

202

The Bowes "Seal Fast" Corporation, Indianapolis, Ind., introduces the "Trouble Trio." The three caricatures are being used by the Bowes "Seal Fast" Corporation to call attention to the leading cause of battery cable trouble . . . terminal corrosion, poor fit of terminal of battery post, and undersized wiring. Humorous, eyecatching caricatures have been developed to illustrate each of these common troubles. Recent advertising has used these characters along with the information that "Bowes Battery Cables featuring Corrodeless Terminals tailor-made to fit the battery post and full-sized wiring beats all three trouble-makers."

203

The Frank N. Wood Co., of Waukesha, Wis., is featuring a new model Starter-Generator Shop Press, designed for use in dismantling and assembling starters and generators,



as well as for general-purpose press jobs. Available in both bench and floor models, the press is equipped with various attachments that enable it to be used for general purpose work.

204

Speco, Inc., Cleveland, Ohio, announced that Rustrem automotive anti-rust paint is now available in both black and aluminum. Rustrem, applied over rust, is said to penetrate the rust layer and make it inactive while sealing the surface against further rusting. It is designed for use under fenders, on battery boxes, gas tanks, and general under chassis work.

205

The Warner-Patterson Company, Chicago, Illinois, is now marketing Warner Service Cleaner in a newly designed container. The manufacturer states that this cooling system cleaner is non-poisonous, non-acid, and safe for all metals. It is also said that it requires no after-neutralizer.



1532 W. Fulton St. Chicago 7

The World's Largest Exclusive Rebuilder of Brake Cylinders

50 YEARS OF PROGRESS WITH KESTER SOLDER

The present type of cored solder used by industry was first made by J. F. Kester in 1899. From the simple beginning of its first application...a few soldered connections in the old hand-crank telephone...it has continued to grow by keeping pace with new techniques as demanded by industry. Today's modern production would not be possible without cored solder.

Standard for Industry and Home Since 1899





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hicago 7

uary, 1949

RADIO-TELEVISION—The early commercial, amateur, and professional builders of radios accepted Kester Rosin-Core Solder as standard. Then as now, Kester still leads in this field.



AUTOMOTIVE — Ever since its inception Kester Acid-Core Solder has been and still is the standard in the automotive field and for the trade. Mechanics and repairmen insist upon it.



ELECTRICAL-ELECTRONIC — Kester makes a great variety of "specialized" core solders and solder preforms—even those suitable for the fine touch required in electronic work.



of KESTER Flux-Cored SOLDER



AGRICULTURAL—For a half century Kester Cored Solder has been the farmer's standard for maintenance and repair. He uses Kester because his soldering must be fast and reliable.



HOMECRAFT—In hobbycraft as well as home repair, good solder bonds are essential. Kester Metal Mender and Radio Solder are the standards for all homecraft workers.



INDUSTRIAL—Kester Cored Solders have met every requirement for the past half century. They have earned the reputation for and are recognized as standard for industry.

Free —Technical Manual. Send for Kester's new 28-page manual, "Solder and Soldering Technique." A complete analysis of the application and properties of soft solder alloys and soldering fluxes.



KESTER SOLDER COMPANY

4242 Wrightwood Avenue, Chicago 39, Illinois

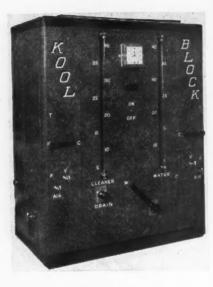
FACTORIES ALSO AT NEWARK, NEW JERSEY . BRANTFORD, CANADA

It's HERE

A successful method of Block and Radiator cleaning .

On the Car!

KOOL BLOCK SYSTEM



The Kool Block Machine tests for leaks in cooling systems without removing the radiator from the car . . .

The Kool Block Machine tests for flow in the radiator ON or OFF the car . .

The Kool Block Machine does not require running of the motor during cleaning process. It supplies its own heat .

The Kool Block Method is the only method that can show the customer, his radiator and motor are completely clean, before he leaves your shop . .

Forty-five minutes or less, labor time, is used on each complete job by The Kool Block Method.

The Kool Block Machine is designed to convert radiator repair shops into New, Complete Cooling System Service Centers and will increase their earning capacity by as much as 50%.

> A Few State Distributorships Still Open

Write or Wire for Further Information

KOOL BLOCK SYSTEM, INC. COLUMBUS 15. OHIO

Air Compressors Alignment Equipment Battery Chargers Electric Drills Hand Tools Jacks, Lifts, Hoists **Test Equipment** Valve Equipment Welding Equipment

Wholesalers' Report

The lists below show the most active jobber lines as indicated by a que naire sent to 4000 wholesalers in the United States.

BRAKE PARTS . BRAKE FLUID . BRAKE CABLES . BRAKE TOOLS

FULL LINE JORRERS Parts & Chemicals

Batteries Bearings Brake Lining Fan Belts Gaskets **Ignition Parts** Mufflers & Tail Pipes Paint Piston Rings Spark Plugs

Equipment

Lubricating Equipment

PARTS JORRERS Parts & Chemicals

Batteries **Brake Lining** Clutches & Clutch Parts Fan Belts Gaskets Ignition Parts—Bearings Motor Parts Mufflers & Tail Pipes Piston Rings Spark Plugs

Equipment

Air Compressors Alignment Equipment **Battery Chargers** Electric Drills Hand Tools Jacks, Lifts, Hoists Lubricating Equipment Test Equipment Valve Equipment Welding Equipment

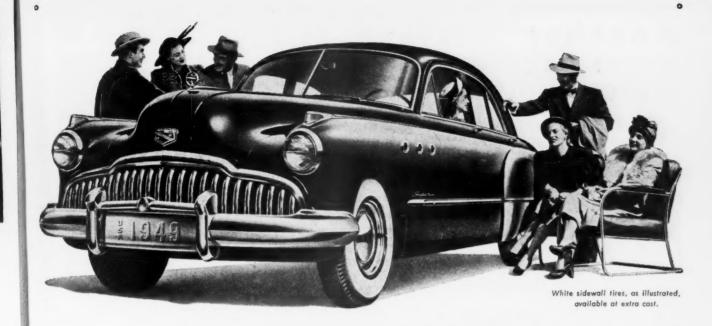
SPECIALTY JOBBERS Parts & Chemicals

Batteries—Accessories Bearings Chemicals—Fan Belts Fuel Pumps **lanition Parts** Mufflers & Tail Pipes Paint Piston Rings Radiator Hose Spark Plugs

Equipment

Air Compressors Alignment Equipment Battery Chargers Electric Drills Hand Tools Lifts, Jacks, Hoists Lubricating Equipment Paint Equipment Test Equipment Welding Equipment





There's plenty to cheer in the Buy of the Year

There's the superb spaciousness of it, for one thing, in both seating and seeing — from basic roominess made even greater by deep-cradling seats, and from vision made a vista by stepped-up glass area.

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nuary, 1949

There's the silky-smooth magic of Dynaflow Drive—now standard equipment on all Buick ROADMASTERS and optional at extra cost on Buick SUPERS.

There's the beacon-light styling of this blue-ribbon Buick — with the functional beauty of chromeringed VentiPorts which act as

heat outlets for the engine compartment.

There's the flashing action of Fireball power cradled on Hi-Poised engine mountings — plus new self-setting valve lifters to keep engines lastingly quiet and efficient.

There's the soft and steady ride of a truly big car where every wheel is cushioned by a special coil spring and every tire is an oversize pillow mounted on a wider-than-usual rim.

There's the rich comfort of wideswinging doors that are featherlight in action—of glare-shielded instruments—of hood latches within the car—of fine fabrics and finish and fittings.

Yet with all this, there's the wonderfully welcome surprise to be found on the price tags. For matched against the field, Buick's delivered prices are almost impossible to pass up.

And from the looks of the books of Buick dealers everywhere, folks are finding Buick the top buy of the year — by far!

BUICK DIVISION OF GENERAL MOTORS

When better automobiles are built

BUICK
will build them

BUICK alone has all these features

Silk-smooth DYNAFLOW DRIVE* • FULL-VIEW VISION from enlarged glass area

SWING-EASY DOORS and easy access • "LIVING SPACE" INTERIORS with Deep-Cradle cushions

Buoyant-riding QUADRUFLEX COIL SPRINGING • DUREX BEARINGS, main and connecting rods

Cruiser-Line VENTIPORTS (Super and Roadmaster) • Low-pressure tires on SAFETY-RIDE RIMS
Lively FIREBALL STRAIGHT-EIGHT POWER on HI-POISED ENGINE MOUNTINGS

Ten smart models featuring BODY BY FISHER

#Standard on ROADMASTER, optional at extra cost on SUPER models.

Tune in HENRY J. TAYLOR, ABC Network, every Monday evening

MOTOR AGE, January, 1949

Another "Perfect" Hit!

VALVE PACKING MERCHANDISER



YOU will be proud to give this smart 2-color merchandiser a prominent place in your establishment — and highly gratified by the returns it brings you in hard, cold cash profits!

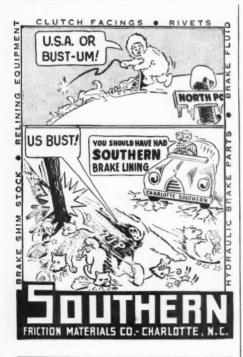
These cabinets are designed for fast selling as well as high eye appeal and space saving. Each cabinet contains an assortment of 308 Valve Packings (12 numbers) to service all passenger cars, most trucks and buses on the road today.

Boxes marked in bold type for quick spotting.

Write today-or see your jobber.

PERFECT PARTS, Inc.

55 Amsterdam Avenue New York 23, N. Y.



Buy United States

Savings Bonds

Equipment and Tool Institute Offers Specialized Plan

Lynn F. Woolman executive manager of the Equipment and Tool Institute, Kalamazoo, Mich., appeared on association programs in Chicago, prior to the ASI Show with a recommendation for specialized selling of equipment and tools.

The Institute advocates to automotive wholesalers that they employ one or more special men to supplement the efforts of territory salesmen in the selling and servicing of shop equipment and tools.

The plan would bring more expert knowledge of highly specialized equipment to the service dealer who buys the apparatus; and improve the jobbers service to his customer, Mr. Woolman pointed out.

To support this conviction, and also to be of assistance to whole-salers, a "Manual of Specialized Selling of Automotive Equipment and Tools" is available to jobbers through the Institute headquarters.

NSPA Elects Officers

(Continued from page 46)

ing manager for McQuay-Norris Manufacturing Company, St. Louis, Missouri, to the office of junior vice-president and director.

Nearly 1,100 representatives of wholesaler and manufacturer member firms from every section of the United States, Canada, and approximately ten foreign countries attended the convention sessions, held at the Sherman Hotel. This was one of the largest NSPA membership gatherings in the association's quarter-century history and a full program of nationally known speakers, an "Advertising is Selling" production of the Automotive Advertisers Council, and the presentation of the first annual awards for Automotive Wholesaler Advertising highlighted the convention sessions.

Automotive Advertisers Council Makes Awards

(Continued from page 46)

from \$250,000 to \$500,000: First award, Lyons Auto Supply, Decatur, Ill.; second, Wolf Supply Co., Vancouver, Wash.; third, Jupe Motor Supply, Amarillo, Texas.

In the \$100,000 to \$250,000 volume group: First award, Wright Auto Supply Co., Macon, Mo.; second, Medendorp Auto Supply Co., Muskegon Heights, Mich.; third, Chet Martin's Auto Parts, Wilmington, Calif.

Awards were also made to Canadian wholesalers, as follows: First award, Provincial Automotive Trading Co., Toronto, Ontario; second, Omer DeSerres, Ltd., Montreal, Quebec, third, St. Clair Automotive Supply, Toronto, Ontario.

Willard

SAFFTY-FILL" BATTERIES

Sell Quicker...Easier...

At Greater Annual Profit

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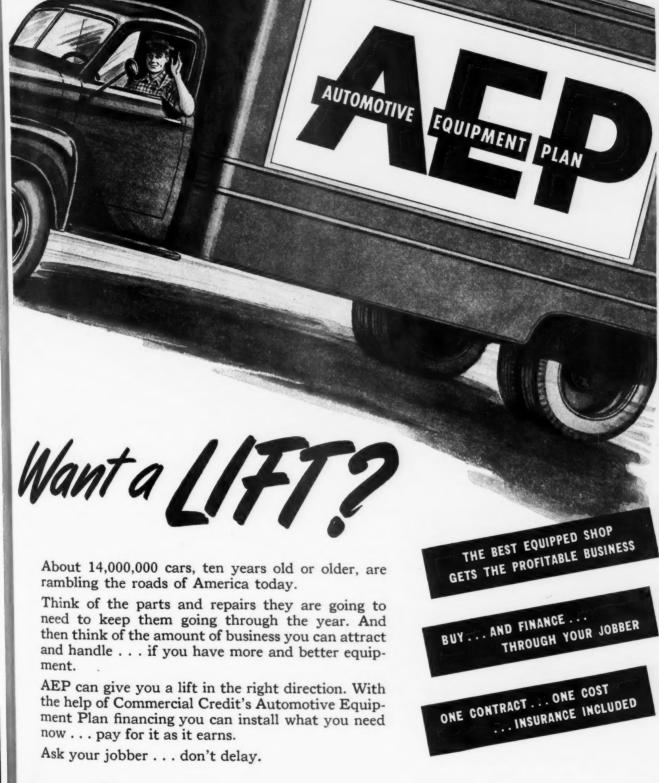
xas. \$250,000 award, Macon, uto Sups, Mich.; o Parts,

follows:
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St. Clair
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Profit

nuary, 1949





If you don't know about A E P . . . ask your jobber.

COMMERCIAL CREDIT CORPORATION

A Subsidiary of
Commercial Credit Company, Baltimore - Capital and Surplus \$90,000,000

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA







Record Attendance Marks MEWA Annual Meeting

(Continued from page 46)

of the National Congress of Petroleum Retailers, Louis M. Faber, treasurer of the N.C.P.R., Nelson Maynard, President of the Georgia Gasoline Retailers Association and J. Howard Reed, M.E.W.A. Merchandising and Legislative Council, taking part in the discussions on this huge service station market that the wholesaler should not overlook.

The M.E.W.A. Advertising Program for member firms was covered by John E. Peters, Assistant to the General Manager of M.E.W.A. Carl E. Sanders, Advertising Director, C. E. Niehoff & Company, spoke on how the manufacturer should assist the wholesaler by the proper style of advertising copy.

"The Menace of Unbridled Power" was the title of the closing address by B. W. Ruark, General Manager of the M.E.W.A. Mr. Ruark's talk dealt with the concentration of power in government, business and labor and how this unbridled power that threatens our liberties can be done away with. His talk was the concluding one of the two-day convention.





The dependable battery that millions of car owners want.

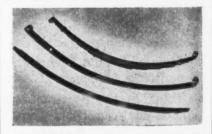
THE ELECTRIC STORAGE BATTERY
COMPANY, Philadelphia 32
Exide Batteries of Canada, Limited, Torontu

WHEN IT'S AN EXIDE ... YOU START





SERVICE SPRING COMPANY
INDIANAPOLIS 6, INDIANA



for Longer Life and Better Service MOOG INDUSTRIES, INC., ST. LOUIS



Chain snaps loose from holder with a slight pull—snaps back on just as easily. Can be imprinted with your name and address. The ideal premium and good will builder. Write for literature and FREE catalog of Premiums.

HAUSMAN MFG. & SALES CO. 1243 N. Harding Ave., Chicago 51, Ill.

M

FIRSTwith the MOST at's GLOBE 2-Post



Yes, the photo at the left was deliberately "posed." It was staged to show how eight mechanics can work with plenty of "elbow room" under a car raised on the Globe 2-Post Hoist. Contrast this scene with the old fashioned way where just one mechanic, lying flat on his back underneath the car, is cramped for space and restricted in working efficiency. Here's further proof why car dealers, garage owners and service station operators everywhere are increasing service profits from 30% to 50% with Globe Hoists.

Extra GLOBE Features Like These Mean Extra Profits In Motor Service . . .



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TERY

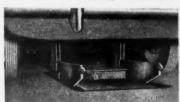
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T. LOUIS

on just as with your cal premiums.

anuary, 1949

HANDLES OFF. Exclusive longer bear-CENTER LOADS ing plunger; larger bearings further apart.



SMOOTH Slot-recessed blade rails. Automatic slot cover doors can be funished if desired.



EDGE MOUNTED Greater accessibility.
Handle wider range of wheel bases.



UNORSTRUCTED No inconvenient slid-

mechanisms clutter floor area.



QUICK JACK Instant adjustment. No crawling or stretching to crawling or stretching to position jacks under car.



COSTS LESS

Less excavating, due to fixed position cylinders. fixed position cylinders. Simplified design



THE "BEST" LIFT . . . SAFER, SMOOTHER, QUICKER

GLOBE HOIST COMPANY . Philadelphia 18, Pa. . Des Moines 6, Iowa

America's Most Complete Line of Hydraulic and Electric Lifts . . . Automobile, Bus, Truck, Double-Duty, Industrial

CONTACT YOUR JOBBER-

HE CARRIES U. S. ELECTRICAL TOOLS

Model 1950

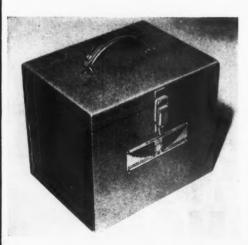


RVI-SET. HEAV. **HEAVY-DUTY VALVE SEAT** GRINDING SET

grinding set. It's all there . . . ready for use on all current model passenger car and light truck valve seats.

★ For general service in garages and shops. Every item in the set is practical and designed to help you turn out the best job in the shortest possible time.

★ For Buick, Cadillac, Chevrolet, Chrysler, De Soto, Dodge, Ford V8 and 6, Hudson, Lincoln, Mercury, Nash, Oldsmobile, Packard, Plymouth, Pontiac, Studebaker, Willys and Kaiser-Frazier passenger cars. Also, for light weight trucks.



★ COMPLETE with heavy-duty 55° high speed driver and heavyduty stone dresser; stone holder; pilot wrench and a supply of pilots and stones. Furnished for 110, 220 or 250 volts.

* Contained in brilliant crimson metal box with leather handle. Everything in its place, snugly arranged for convenient handling, contents easily removed and replaced in container.

The UNITED STATES ELECTRICAL TOOL Co.

CINCINNATI, OHIO

MOTO

New Hudson-the ride sensation for 49!





Shown above — Interior, Hudson Commodore Custom Club Coupe, typical of the luxurious interiors in all New Hudsons.

AUTOMATIC GEAR SHIFTING in forward speeds provided by Hudson's Drive-Master transmission—by far the easiest of all ways to drive. You can accelerate as long and as fast as you like in pick-up gear, then lift your toe momentarily, and you're in high. The shift into high comes only when you are ready! Button control on the instrument panel provides instant change to conventional driving if ever desired. Drive-Master transmission is optional on all New Hudsons at small extra cost.



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anuary, 1949



HUDSON FLOORS are recessed down within the frame (shown above), seats are lowered, so you of more than ample head room in this first car with the new, lower silhouette.

YOU RIDE DOWN within a base frame (shown shove), and rear seats are positioned ahead of the rear wheels so that full body width becomes valiable for wonderfully roomy seats—four licks wider than the car is high. Box-section steel girders encircle and protect the passenger compartment.

The many advantages in Hudson's new "step-down" design principle are fully explained and illustrated in a booklet available at the nearest Hudson dealer's.

Hudson's exclusive "step-down" design provides sensational advances in riding qualities, roadability, safety and performance—as well as in outstanding beauty.

HERE, in truth, is the "stuff that dreams are made on." Yes, men the world around have long sought the low-built dream car. for they've always known that the lower an automobile can be built, the better it will ride, the easier it will handle and the safer it will be.

But when designers have tried to build that ideal car without lowering interior floors, they've had to keep top lines high to preserve inside head room, or reduce inside room to get top lines down—an unhappy compromise either way.

And wherever designers have compromised, their dreams have gone glimmering, for no car has really achieved the much-wanted, truly low silhouette.

No car, that is, until Hudson!

That's because the New Hudson is the first motor car with a truly low silhouette—the result of a recessed floor you step down onto. With this "step-down" zone in an exclusive Monobilt body-and-frame*. Hudson builds the lowest car on the highway—just five feet

from ground to top—yet this automobile has more head room than in any mass-produced car built today!

Motorists quickly find that this low-built Hudson has a smooth, hug-the-road way of going over all kinds of surfaces, especially on curves, which gives them a world of assurance and a feeling of safety beyond anything they've known before! This is largely due to the fact that Hudson has the lowest center of gravity in any American stock car!

They find, too, that this same new, lower center of gravity and magnificent streamlining gives Hudson's masterful power plant full opportunity to perform with all its eager, flashing brilliance.

And once motorists experience the ease with which this car is controlled and the silence in which it glides along, once they see how authentic is Hudson's beauty—how naturally its free-flowing lines develop from the "step-down" principle, they are strongly inclined to agree that this car is so far ahead it is a protected investment in motor car value!**

The Hudson dealer franchise matches these great product advantages. Both are carefully planned for continually growing volume and profits. Hudson Motor Car Co., Detroit 14.

*Trade-mark and patents pending.

The only car you step

down into

new Hudson



Eight body styles in Super Series and Commodore Custom Series. Your choice, 121 h.p. all-new Super-Siz or 128 h.p. masterful Super-Eight engine. Super-Cushion tires. Ten rich body colors. Two special colors or five two-tone combinations—white sidewall tires—at extra cost.

MOTOR AGE, January, 1949

AIR BUILDS STATION PROFITS



POWER FOR EXPANSION

PLENTY OF COMPRESSED AIR is the cheapest labor you can hire. If your compressor runs too frequently or you have to wait for pressure to build up, you need a larger unit. Choose a Wayne for reliable, low-cost service. Every two-stage unit is tested for efficiency before shipment.

Wayne Air Compressors have many features that assure long life and trouble-free performance. The Wayne Constant Level Oiling System is positive. Cylinders are deeply finned, directly in a blast of air from the propeller-type flywheel. Cool operation and slow speed assure longer life.

MAIL NOW FOR CATALOG

THE WAYNE PUMP COMPANY, FORT WAYNE 4, IND. 504 Tecumseh Street

Please send_us without obligation
Catalog of Wayne Air Compressors; Folder on Wayne Single or Two-Post Hoists; Hose Real Bulletin; Folder on Wayne Car Washers

NAME

ADDRESS

CITY

AUTO LIFTS . CAR WASHERS . HOSE REELS

STATE

NATIONWIDE SERVICE

220

MOTOR AGE, January, 1949

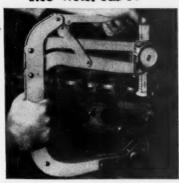
M

Meet 6 of K-D's Family

THEY MAKE HARD JOBS EASY

Im 380 Compressor--fast for valve-inheads and L-heads. One man operates me with ease.





I'm 110 Contact Point Wrench---- I remove, install stationary points on Autolite-type distributors.





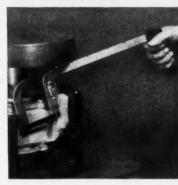
I pull Ford Valve Guides no matter how tight they're stuck! You can't beat the 920 Set for saving time.





I SAW AROUND CORNERS! With a flip of the finger you install my 3" blade that does the trick. I'm clever No. 99





Im 700, the shortest valve lifter there isonly 8" long, I service hardto-get-at jobs, fast, easy.



on

anuary, 1949



Everybody's favorite, good old 600! For all kinds of L-heads, even industrial.





Meet the whole K-D Family---write for descriptive catalog.
K-D MANUFACTURING CO...

LANCASTER, PA HAMILTON, ONT.



K-D Tools

Good Company

Look over the lines listed at the bottom of the page...they're the blue bloods of the automotive "social register."

That's because these lines represent products that are used as original equipment on the leading makes of cars, buses and trucks. That means car owner acceptance - a vital matter for those who handle service and replacement parts.

You'll be in "good company" when you decide to participate in this vast presold

General Motors Building, Detroit 2, Michigan

market. Talk it over with a United Motors distributor, or write us direct.

MOTORS SERVICE

Division of General Motors Corporation

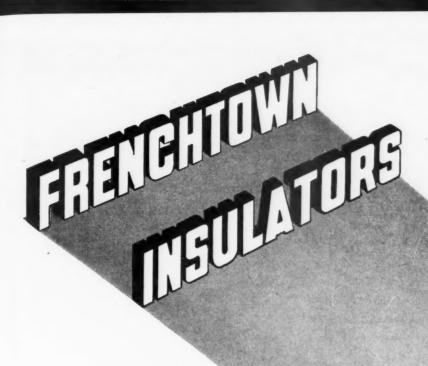


DELCO Batteries AC Fuel Pumps, Gauges HYATT Roller Bearings and Speedometers **DELCO Auto Radios DUREX Engine Bearings INLITE Brake Lining SAGINAW Jacks**

DELCO Radio Parts DELCO Home Radios and Television **DUREX Gasoline Filters**

HARRISON Heaters DELCO Shock Absorbers NEW DEPARTURE Ball Bearings GUIDE Lamps

DELCO-REMY Starting, Lighting and Ignition KLAXON Horns HARRISON Radiators **ROCHESTER Carburetors HARRISON Thermostats DELCO Hydraulic Brakes**



SUPERIOR
SPARK PLUG
PERFORMANCE

Here at FRENCHTOWN plant, skilled ceramic engineers carry on a continuous program of research to maintain the high standards of insulator efficiency for better spark plug performance.

You'll find that FRENCHTOWN INSU-LATORS have unusually high heat resistance, and high dielectric and mechanical strength. Don't hesitate to write us. Our engineers will be glad to discuss your insulator requirements.

USED BY MORE
SPARK PLUG MANUFACTURERS
THAN ANY OTHER MAKE



Sales Office, 8 Muirhead Ave., Trenton, N. J.

Factory, Frenchtown, N. J.

MOTOR AGE, January, 1949

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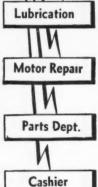
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Users Report They Turn Out 20% to 50% More Jobs Daily with Executone Intercom!

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This exclusive, easy-to-operate TRINDL WELDER is a big saver for any shop...MODEL 125A is ruggedly built...Can easily be carried right to the job and connected to any convenient properly wired 110 volt 50-60 cycle AC supply line...With it you can BUILD OR REPAIR auto and home appliance, farm implements and tools . . . Fabricate special shop equipment, jigs and fixtures out of prime or scrap sheets, bars and tubes and do hundreds of other repair and construction welding jobs when you need them and as you want them done. MODEL 125A has 16 heat stages ranging from 20 to 125 amps, handles 1-16" to 5-32" rods...Comes complete Ready to Operate—Nothing Else to Buy. Also available for 220 and other voltages at slight additional cost.

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MOTOR AGE

—is a publication keyed directly to the needs of the automotive after - market. Built on the requirements of car dealers and repair shops. Edited by Frank P. Tighe. Read it every month.

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CHESTNUT AND 56TH STS.
PHILADELPHIA 39, PA.





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Many are called but few are chosen. In developing new models, GM stylists consider hundreds of sketches—also make and study miniature clay sculptures.

All the new GM cars for 1949 are on display this month.

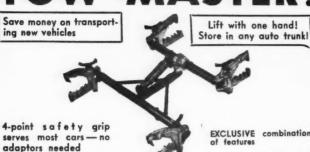
And one good look tells you how sound their styling is—as well as how smart. You enter easily into spacious interiors, with high visibility and deep-seated comfort. You enjoy superb trim and fittings, find evidence of thorough planning on every hand. For your 1949 GM car is not merely a work of the stylist's art. Into each has gone months of work in research, engineering and production that combine to give it comfort, convenience, performance and durability along with surpassing beauty. That's why so many people already are saying that GM sets the pace in the 1949 automotive parade.



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illustration shows standard kit with two extra tube outlets.



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It reaches 24,994 Car and Truck Dealers out of a total of 40.410.

It goes to 37,285 Independent Maintenance Establishments out of a total of 55,694.

It has 3,562 Jobber subscribers out of a total of 7,982. In other words MOTOR AGE reaches approximately two-thirds of the automotive retail establishments, and since its subscription staff is salaried and completely controlled, this circulation is highly selective, quality coverage. It represents preponderantly managers and proprietors of the larger and more important establishments — men with buying power and money to implement it.

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Hull Compasses will be sold by more thousands of dealers and jobbers than ever before, in 1949. The reason is important to you. It's simply because Hull Compasses again, proved in 1948—their 15th year of increasing sales—that they are a zurefire bet as a source of easy, added profit. The market has never stopped growing. Your customers will buy them too.



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BOOST YOUR SERVICE PROFITS WITH



DELCO SUPER 9 Brake Fluid is long lasting and effective over a wide temperature range, 50° F. below to 300° F. above. It's non-gumming-safe for metal and rubber parts.

DECLENE Flushing Fluid cleans out all the old, deteriorated brake fluid from hydraulic lines; gets rid of dirt and gum.

NEW DELCO SUPER 11 HEAVY-DUTY BRAKE FLUID

A new hydraulic brake fluid developed to meet the severest requirements of heavy-duty truck and bus braking even under extreme conditions of load, road and weather.



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DEGLENE

The often overlooked hydraulic system is an important part of brake service . . . and a profitable one for the serviceman. Delco Super 9 brake fluid and Declene flushing fluid pay well in immediate profits and give customer satisfaction that means repeat business through the years.



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SUPER 9 AND SUPER 11 BRAKE FLUID . DECLENE . BRAKE PARTS STANDARD FOR EQUIPMENT . THE STANDARD FOR REPLACEMENT

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Why Car Owners Are Buying HOWARD ZINK
Sure-Fit Seat Covers

- 1...Because they make it possible for car owners to plan their own "interiors" to suit their individual tastes. Every car owner his own interior decorator!
- 2...Because they add beauty and brightness and an allaround extra charm and character—the good old eyeand-style appeal!
- 3...Because they protect and prolong the life of the upholstery and increase car resale value.
- 4...Because they provide an extra measure of sitting, riding and "getting in and out" comfort.
- 5...Because they really fit.



ALL THESE REASONS

Why Dealers Are Selling HOWARD ZINK Sure-Fit Seat Covers

- 1... Because the Howard Zink Sure-Fit line offers a wealth of smart, colorful designs — in other words, eye-and-style appeal to burn! They're easy to sell and they stay sold.
- 2...Because Howard Zink Sure-Fit seat covers fit perfectly—because they're designed and cut and tailored to fit perfectly. They're easy to sell and they stay sold.
- 3...Because Howard Zink Sure-Fit seat covers are easy and quick to install—and because the Howard Zink Code Size Chart "picks out" the right cover for any make or model of car and makes sure the installation is accurate
- 4... Because for a quarter-century Howard Zink has been putting quality into seat covers fabric quality and manufacturing quality. All seat covers are guaranteed against defects in materials and workmanship.

- 5...Because Howard Zink's three plants, located at widely separated points, assure expeditious delivery service to dealers everywhere.
- 6...Because Howard Zink research is never done. New developments are constantly being achieved to keep Sure-Fit seat covers ahead of the parade.
- 7...Because Howard Zink has long been noted for its dealer policies of fair treatment and better dealer profits.
- 8...Because Howard Zink provides well planned, hard hitting advertising and display helps to its dealers.
- 9...Because to be the biggest you have to be good—and more Sure-Fit seat covers have been sold and are still being sold than any other make.

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MODERN METHODS AND MACHINES ASSURE UNIFORM QUALITY.....



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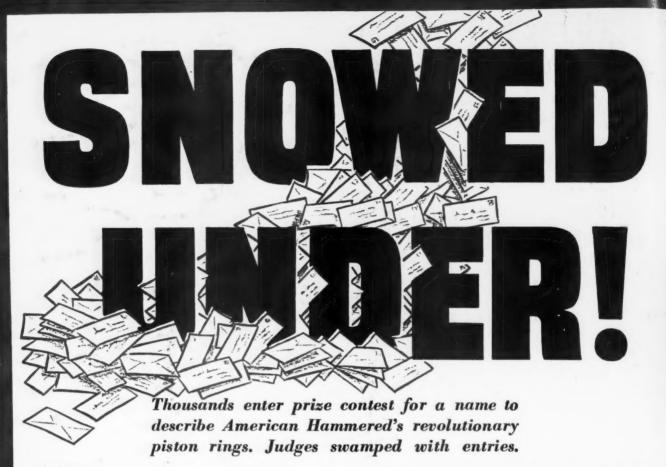
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• Years of sound production experience and batteries of modern precision machines (such as that illustrated) are necessary in order to make piston rings of uniformly high quality. Burd has both . . . 35 years of manufacturing "know-how", plus accurate, high-speed machinery to turn out consistently finer piston rings - in quantity. No wonder Burd Piston Rings are installed as original equipment in many engines where ordinary piston rings would fail. From electric furnace to "Graf-Flox" finish, Burd quality is kept uniformly high through constant research, careful inspection, improved methods and better machines. Remember, Burd superiority means bigger over-the-counter demand and more profits for you. Next time, ask your Jobber for Burd "Graf-Flox" Piston Rings. Install them with the confidence that you are helping your customer to extra thousands of miles of trouble-free driving.

BURD PISTON RING COMPANY . ROCKFORD, ILLINOIS



Last month in this space we offered \$1,000.00 cash for the best name to describe the new revolutionary American Hammered Piston Rings.

As you may remember, this new set of rings which has turned the piston ring business upside down, is based on a new miracle metal—K-Spun—which powers the top compression ring.

It certainly looks like the industry was waiting for this engineering advance. Response to our contest has exceeded our most optimistic expectations! The judges are swamped with entries, and they're burning the midnight oil making the prize selection.

THE KOPPERS AMERICAN HAMMERED K-SPUN COMPRESSION RING . . .

Guaranteed against breakage during installation or in service...50% more "spring" quality; four times the resistance to combustion shock.

Keeps flame in the combustion chamber . . . keeps oil out of it!

Permits high unit pressures—that stay put!

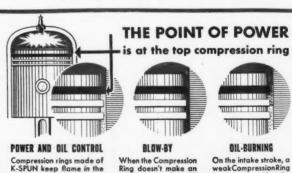
Proved in thousands of hours of wartime flying and in millions of miles of tough fleet service.

The first really effective compression ring for today's high-speed, high-compression engines.

Keep your eye peeled for the next issue of this magazine, when we'll announce the winning name! We'll also announce the largest campaign we have ever undertaken to do justice to the big news of the new American Hammered Piston Ring.

And when the public reads the whole exciting story, you'll see a buying action that will roll up big profits for those who handle, recommend and sell American Hammered Piston Rings.

Koppers Company, Inc., Piston Ring Dept., P.O. Box 626, Baltimore 3, Maryland.



Compression rings made of K-SPUN keep flame in the combustion chamber...keep oil out. K-SPUN is guaranteed against breakage, has 50% more "spring" quality, four times greater strength. Result: top power—gas and oil economy.

When the Compression Ring doesn't make an explosion-proof seal, combustion flame "blows-by" and burns off oil that should lubricate the cylinder wall. Result: excessive scuffing and wear.

On the intake stroke, a weak Compression Ring leaves excess oil on the cylinder wall, which on the compression stroke is then pumped into the combustion chamber. Result: high oil consumption.

In



American Hammered
Piston Rings
A PRODUCT OF KOPPERS RESEARCH